ALBERTA AUTHORIZED RESOURCE LIST and ANNOTATED BIBLIOGRAPHY

# SCIENCE

## Grades 7 to 9

September 2003

Alberta LEARNING
Learning and Teaching Resources Branch

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| | |
|---|---|
| *Administrators* | |
| *Counsellors* | |
| *General Audience* | |
| *Parent School Councils* | |
| *Parents* | |
| *Students* | |
| *Teachers* | ✓ |

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# TABLE OF CONTENTS


Page

**Overview**

Alberta Learning Authorized Resource Categories ..... iii
Annotated Bibliography ..... iii
Availability ..... iii
Authorized Science Resources ..... iii

**Grade 7**

Basic Resources ..... 1
Support and Authorized Teaching Resources:
Unit A: Interactions and Ecosystems ..... 2
Unit B: Plants for Food and Fibre ..... 4
Unit C: Heat and Temperature ..... 5
Unit D: Structures and Forces ..... 6
Unit E: Planet Earth ..... 7

Annotated Bibliography (alphabetical by title) ..... 9

**Grade 8**

Basic Resources ..... 41
Support and Authorized Teaching Resources:
Unit A: Mix and Flow of Matter ..... 42
Unit B: Cells and Systems ..... 43
Unit C: Light and Optical Systems ..... 44
Unit D: Mechanical Systems ..... 45
Unit E: Freshwater and Saltwater Systems ..... 46

Annotated Bibliography (alphabetical by title) ..... 47

**Grade 9**

Basic Resources ..... 69
Support and Authorized Teaching Resources:
Unit A: Biological Diversity ..... 70
Unit B: Matter and Chemical Change ..... 71
Unit C: Environmental Chemistry ..... 72
Unit D: Electrical Principles and Technologies ..... 73
Unit E: Space Exploration ..... 74

Annotated Bibliography (alphabetical by title) ..... 75

**Vendors/Distributors** ..... 89




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# OVERVIEW

## Alberta Learning Authorized Resource Categories

This list of Science resources, Grades 7, 8 and 9, contains resources that have been authorized for use in Alberta schools. Alberta Learning selects and authorizes the best possible instructional materials for the implementation of approved programs of study. The resource authorization categories are **student basic**, **student support** or **authorized teaching**, and the status is noted for each resource.

> **Student Basic** learning resources are those student learning resources authorized by Alberta Learning as the most appropriate for addressing the majority of outcomes of the course(s) or substantial components of the course(s); or the most appropriate for meeting general outcomes across two or more grade levels.
>
> **Student Support** learning resources are those student learning resources authorized by Alberta Learning to assist in addressing some of the outcomes of the course(s) or components of the course(s); or to assist in meeting the outcomes across two or more grade levels.
>
> **Authorized Teaching** resources are those teaching resources identified as the best available resources to support the implementation of programs of study and courses; they may be teacher guides to accompany student resources or teacher professional resources. The authorized teaching guides are listed with the student resources.

The list of these resources is organized by grade and by unit (Unit A to Unit E) within each grade.

**Note:**

Alberta Learning strongly recommends that teachers read all selections in the student resources and all activities in the teacher guides prior to using them with students. Careful consideration should be given to the sensitivities of both the student audience and the community.


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## Annotated Bibliography

Annotations for these new junior high science resources are included in alphabetical order at the end of each grade. The annotations identify the grade(s) and unit(s) the resource is authorized for, a brief description of content, publisher, copyright date and purchasing information.

> **Note:**
>
> As additional new resources authorized for Grades 7–9 Science, their titles/grades and annotations will be included in the next edition of this document.

## Availability

Most of the new Alberta resources are available for purchase from:

Learning Resources Centre
12360 – 142 Street, Edmonton, AB T5L 4X9
Phone: (780) 427–5775
Fax: (780) 422–9750
Internet: <http://www.lrc.learning.gov.ab.ca>

LRC order numbers and prices (as of the printing of this booklet) are included for each resource.

Those resources which must be purchased directly from the vendor/distributor are so noted on the authorized list and on the annotation. A listing of vendors/distributors is provided at the end of this booklet.

## Authorized Science Resources

> **Note:**
>
> For a **complete** list of Science resources, consult the Learning Resources Centre *Buyers Guide*. Some of the older resources will be withdrawn from authorized status in the year(s) ahead.


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104-03575/

# Alberta Authorized Resource List and Annotated Bibliography

## Grade 7 Science

Alberta
LEARNING
Learning and Teaching Resources Branch

# GRADE 7
## Units A, B, C, D, E

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Basic Learning Resources** | | | | |
| ***Addison Wesley Science in Action 7 Series*** | | | | |
| Addison Wesley Science in Action 7 (Student Text)<br>*Addison Wesley Science in Action 7 Series* | 2001 | **Basic**<br>7A / 7B / 7C / 7D / 7E | 449662 | $68.30<br>LRC |
| Addison Wesley Science in Action 7: Teacher's Resource Package<br>*Addison Wesley Science in Action 7 Series* | 2001 | Authorized Teaching<br>7A / 7B / 7C / 7D / 7E | 449688 | $243.05<br>LRC |
| ***ScienceFocus 7 Series*** | | | | |
| ScienceFocus 7: Science • Technology • Society (Student Text)<br>*ScienceFocus 7 Series* | 2001 | **Basic**<br>7A / 7B / 7C / 7D / 7E | 449703 | $67.45<br>LRC |
| ScienceFocus 7: Science • Technology • Society: Illustrations CD-ROM (Macintosh / Windows Version)<br>*ScienceFocus 7 Series* | 2001 | Authorized Teaching<br>7A, 7B, 7C, 7D, 7E | 451857 | $174.50<br>LRC |
| ScienceFocus 7: Science • Technology • Society: Teacher's Productivity Package (Macintosh / Windows Version)<br>*ScienceFocus 7 Series* | 2001 | Authorized Teaching<br>7A, 7B, 7C, 7D, 7E | 508418 | $149.35<br>LRC |
| ScienceFocus 7: Science • Technology • Society: Teacher's Resource Binder (with Blackline Masters on CD-ROM) (Windows/Macintosh)<br>*ScienceFocus 7 Series* | 2001 | Authorized Teaching<br>7A / 7B / 7C / 7D / 7E | 449711 | $237.50<br>LRC |


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# GRADE 7

## Unit A - Interactions and Ecosystems

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Support Learning Resources** | | | | |
| Animal Interdependency; Endangered & Extinct Animals; Food Chains<br>*Animal Life in Action Series* | 2000 | Support<br>7A | | LRC |
| | | Animal Interdependency (Video) | 480872 | $76.00 |
| | | Endangered & Extinct Animals (Video) | 480880 | $76.00 |
| | | Food Chains (Video) | 480898 | $76.00 |
| NEW The Barrens Quest | 1997 | Support<br>7A | 520884 | $58.40<br>LRC |
| Burns Bog: A Road Runs Through It | 1999 | Support<br>7A | 468018 | $46.70<br>LRC |
| Coral Reefs: Vanishing Treasures (Video and Teacher's Guide) | 1999 | Support<br>7A<br>(Marlin Motion Pictures Ltd.) | | Vendor Direct |
| The Digital Field Trip to the Desert (Macintosh / Windows Educational Version 1.2)<br>*The Digital Field Trips Series* | 2001 | Support<br>7A / 7E | 470386 | $86.80<br>LRC |
| The Digital Field Trip to the Rainforest (Macintosh / Windows Educational Version 1.2)<br>*The Digital Field Trips Series* | 2001 | Support<br>7A / 7B | 470427 | $86.80<br>LRC |
| The Digital Field Trip to the Wetlands (Macintosh / Windows Educational Version 1.2)<br>*The Digital Field Trips Series* | 2001 | Support<br>7A / 7B | 470451 | $86.80<br>LRC |
| Earth's Endangered Environments (Macintosh and Windows Version)<br>*NGS PictureShow Series* | 1994 | Support<br>7A | 511007 | $109.90<br>LRC |
| Ecology (Macintosh Version 1.0 / Windows Version 1.1)<br>*Biology Concepts Series* | 1997 | Support<br>7A | 467911 | $182.95<br>LRC |
| FEESA: Video Tour Part 2 (Forestry Field Trip) | | Support<br>7A / 7B | 467846 | $23.40<br>LRC |
| The Food Chain<br>*Animal Life and Beyond Series* | 1998 | Support<br>7A | 479015 | $57.30<br>LRC |
| NEW Footprints in the Delta | 2000 | Support<br>7A | 520876 | $46.70<br>LRC |
| Great Northern Forest | 1994 | Support<br>7A | BPN 840201 | ACCESS–The Education Station |
| Heat and Living Beings<br>*Animal Life and Beyond Series* | 1998 | Support<br>7A / 7C | 479023 | $57.30<br>LRC |
| Horses of Suffield | 1998 | Support<br>7A | 468026 | $46.70<br>LRC |
| Marine Life<br>*Animal Life and Beyond Series* | 1998 | Support<br>7A / 8E | 479031 | $57.30<br>LRC |


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# GRADE 7 (continued)
## Unit A - Interactions and Ecosystems

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| The Scientific Method | 2000 | Support 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E | BPN 2065501 | ACCESS–The Education Station |
| Sea Otters<br>*Champions of the Wild Series* | 1998 | Support 7A | 467995 | $46.70 LRC |
| St. Lawrence River Belugas<br>*Champions of the Wild Series* | 1998 | Support 7A | 468000 | $46.70 LRC |
| Succession | 1994 | Support 7A | 482175 | $70.10 LRC |
| Symbiosis: Nature's Delicate Balance | 1995 | Support 7A | 510942 | $57.30 LRC |
| **Authorized Teaching Resources** | | | | |
| NEW Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) | 2000 | Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E | 434803 | $12.00 LRC |
| Oceans - Climate Explorer (Windows / Macintosh Version)<br>*Earthstation Library Series* | 2000 | Authorized Teaching 7A / 8E | 472134 | $92.60 LRC |
| Pollution<br>*National Geographic Geokit Series* | 1997 | Authorized Teaching 7A | 510992 | $403.30 LRC |
| Why Wetlands? Education Kit | 1994 | Authorized Teaching 7A | 511966 | $29.20 LRC |


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# GRADE 7
## Unit B - Plants for Food and Fibre

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Support Learning Resources** | | | | |
| A Closer Look at Plants (Macintosh / Windows Version) | 2001 | Support 7B | 509771 | $130.95 LRC |
| The Digital Field Trip to the Rainforest (Macintosh / Windows Educational Version 1.2) *The Digital Field Trips Series* | 2001 | Support 7A / 7B | 470427 | $86.80 LRC |
| The Digital Field Trip to the Wetlands (Macintosh / Windows Educational Version 1.2) *The Digital Field Trips Series* | 2001 | Support 7A / 7B | 470451 | $86.80 LRC |
| Farming *Bill Nye the Science Guy Series* | 1998 | Support 7B | BPN 855281 | ACCESS–The Education Station |
| FEESA: Video Tour Part 2 (Forestry Field Trip) | | Support 7A / 7B | 467846 | $23.40 LRC |
| Plant Biodiversity; Plant Reproduction; Plant Structure and Growth; Plants & People: A Beneficial Relationship *Plant Life in Action Series* | 2000 | Support 7B | | LRC |
| | | Plant Biodiversity | 479247 | $76.00 |
| | | Plant Reproduction | 479255 | $76.00 |
| | | Plant Structure and Growth | 479263 | $76.00 |
| | | Plants & People: A Beneficial | 479271 | $76.00 |
| Plant Reproduction *Plant World Series* | 2000 | Support 7B | 478306 | $192.90 LRC |
| Plant Structure and Function *Plant World Series* | 2000 | Support 7B | 478281 | $192.90 LRC |
| Plants: What it Means to be Green (Macintosh / Windows Version 3.0) *NGS PictureShow Series* | 1998 | Support 7B | 510984 | $109.90 LRC |
| The Scientific Method | 2000 | Support 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E | BPN 2065501 | ACCESS–The Education Station |
| The World of Plants *Plant World Series* | 2000 | Support 7B | 478299 | $192.90 LRC |
| **Authorized Teaching Resources** | | | | |
| NEW Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) | 2000 | Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E | 434803 | $12.00 LRC |
| People and Plants (with Teacher's Guide) *The World of Plants Series* | 2000 | Authorized Teaching 7B | 513334 | $34.95 LRC |
| Photosynthesis: Light into Life (Videocassette with Teacher's Guide) | 1997 | Authorized Teaching 7B | 485509 | $232.65 LRC |
| Plants *National Geographic Geokit Series* | 1999 | Authorized Teaching 7B | 467937 | $403.30 LRC |


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# GRADE 7

## Unit C - Heat and Temperature

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Support Learning Resources** | | | | |
| Heat and Living Beings<br>*Animal Life and Beyond Series* | 1998 | Support<br>7A / 7C | 479023 | $57.30<br>LRC |
| Molecular Motion<br>*Science Key Concepts: Physics / Chemistry Series* | | Support<br>7C | 513342 | $34.95<br>LRC |
| Properties of Matter<br>*Physical Science in Action Series* | 2000 | Support<br>7C / 8A | 480905 | $76.00<br>LRC |
| The Scientific Method | 2000 | Support<br>7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E | BPN 2065501 | ACCESS–The Education Station |
| Turning Down the Heat: The New Energy Revolution | 1999 | Support<br>7C | 468034 | $46.70<br>LRC |
| **Authorized Teaching Resources** | | | | |
| NEW Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) | 2000 | Authorized Teaching<br>General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E | 434803 | $12.00<br>LRC |
| NEW Geology Explorer (Windows / Macintosh Version)<br>*Earthstation Library Series* | 2000 | Authorized Teaching<br>7C / 7E / 8E | 523028 | $92.60<br>LRC |


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# GRADE 7

## Unit D - Structures and Forces

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Support Learning Resources** | | | | |
| Architecture<br>*Bill Nye the Science Guy Series* | 1998 | Support<br>7D | BPN 855287 | ACCESS–The Education Station |
| Human Body 1: Picture Show CD-ROM (Macintosh / Windows Version 4.0)<br>*NGS PictureShow Series* | 1998 | Support<br>7D / 8B | 467979 | $87.90<br>LRC |
| The Scientific Method | 2000 | Support<br>7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E | BPN 2065501 | ACCESS–The Education Station |
| The Skeletal System (2nd Ed. Revised)<br>*Human Body Series* | 1993 | Support<br>7D | 467820 | $57.30<br>LRC |
| **Authorized Teaching Resources** | | | | |
| NEW Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) | 2000 | Authorized Teaching<br>General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E | 434803 | $12.00<br>LRC |
| Human Body 1: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)<br>*NGS Picture Pack Series* | 1998 | Authorized Teaching<br>7D / 8B | 467953 | $91.20<br>LRC |


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# GRADE 7
## Unit E - Planet Earth

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Support Learning Resources** | | | | |
| All About Rocks and Minerals (Video and Teacher's Guide)<br>*Basics of Geology Series* | 1998 | Support<br>7E<br>(Marlin Motion Pictures Ltd.) | | Vendor Direct |
| The Digital Field Trip to the Desert (Macintosh / Windows Educational Version 1.2)<br>*The Digital Field Trips Series* | 2001 | Support<br>7A / 7E | 470386 | $86.80<br>LRC |
| NEW Formations of Continents and Mountains<br>*Basics of Geology Series* | 1998 | Support<br>7E<br>(Marlin Motion Pictures Ltd.) | | Vendor Direct |
| Fossils<br>*Bill Nye the Science Guy Series* | 1998 | Support<br>7E | BPN 855285 | ACCESS–The Education Station |
| NEW Oceans: Charting the Vastness<br>*Survey of Science: Earth Science Essentials Series* | 1996 | Support<br>7E | 510950 | $115.75<br>LRC |
| Plate Tectonics: Earthquakes, Volcanoes and Mountains (Video and Guide)<br>*Earth Science Series* | 1998 | Support<br>7E | 482191 | $70.10<br>LRC |
| The Scientific Method | 2000 | Support<br>7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E | BPN 2065501 | ACCESS–The Education Station |
| Volcano<br>*Eyewitness Series* | 1996 | Support<br>7E | 467797 | $46.70<br>LRC |
| Water Erosion and Landforms (Video and Guide)<br>*Earth Science Series* | 1998 | Support<br>7E / 8E | 482183 | $70.10<br>LRC |
| What Are Glaciers?<br>*Earth, the Environment and Beyond Series* | 1992 | Support<br>7E / 8E | 467838 | $57.30<br>LRC |
| What Are Volcanoes?<br>*Earth, the Environment and Beyond Series* | 1992 | Support<br>7E | 467812 | $57.30<br>LRC |
| **Authorized Teaching Resources** | | | | |
| NEW Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) | 2000 | Authorized Teaching<br>General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E | 434803 | $12.00<br>LRC |
| Dynamic Earth<br>*National Geographic Geokit Series* | 1998 | Authorized Teaching<br>7E | 467929 | $403.30<br>LRC |
| Dynamic Earth: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)<br>*NGS Picture Pack Series* | 1998 | Authorized Teaching<br>7E / 8E | 470493 | $72.95<br>LRC |
| NEW Geology Explorer (Windows / Macintosh Version)<br>*Earthstation Library Series* | 2000 | Authorized Teaching<br>7C / 7E / 8E | 523028 | $92.60<br>LRC |
| Rocks and Minerals: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)<br>*NGS Picture Pack Series* | 1998 | Authorized Teaching<br>7E | 470500 | $91.20<br>LRC |

# Grade 7: Annotated Bibliography (alphabetical listing)

| | LRC Order No.: | Est. Price: |
|---|---|---|
| **Addison Wesley Science in Action 7 (Student Text)** | **449662** | **$68.30** |
| **Addison Wesley Science in Action 7: Teacher's Resource Package** | **449688** | **$243.05** |

***Addison Wesley Science in Action 7 Series***

**Basic / Authorized Teaching Resource**

© 2001 **Author(s):** Booth, C. et al.

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | |

This student book and teacher's resource binder provide direct support for the Alberta program of studies for Grade 7 Science. Together these resources provide an extensive set of learning activities and planning tools for students and teachers. Numerous Canadian and Alberta examples are provided. The student text includes an introductory outline and summary review section with each chapter, a science toolbox for skill development and a glossary of key terms. The teacher resource includes general sections on skill development, student assessment, and lists of required materials and equipment. Detailed sections in each unit include an overview, instructional suggestions, and several sets of blackline masters targeting a range of instructional and assessment needs.


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LRC Order No.: Est. Price:

## All About Rocks and Minerals (Video and Teacher's Guide)

***Basics of Geology Series***

**Vendor Direct**

**Support Resource**

© 1998
Marlin Motion Pictures Ltd.; 211 Watline Avenue, MISSISSAUGA ON L4Z 1P3
Telephone: 888–260–2232; 905–890–1500 Internet: http://www.marlineducation.com

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | ✓ | | | | | | | | | | |

This video explores the formation and characteristics of rocks and minerals. Using a flow chart, animation, and examples of natural geological features, the video effectively illustrates the rock cycle. The formation of igneous, sedimentary, and metamorphic rocks is described in some detail, along with examples of rocks in each class. The video shows how the process of crystallization leads into an array of crystals with their characteristic shapes. Other features of minerals such as hardness and cleavage are identified, along with the way to test for each property. The resource also looks at the continued discoveries of useful resources (such as oil) in the earth's crust, and researchers' development of new ways to extract them. The video uses a traditional style of presentation with a focus on scientific content. Blackline masters and a teacher's guide can be viewed and printed online at «www.unitedlearning.com».


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| | LRC Order No.: | Est. Price: |
|---|---|---|
| • **Animal Interdependency** | **480872** | **$76.00** |
| • **Endangered & Extinct Animals** | **480880** | **$76.00** |
| • **Food Chains** | **480898** | **$76.00** |

***Animal Life in Action Series***

**Support Resource**

© 2000

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | | | | | | |

• *Animal Interdependency*: This video explores the interdependency of animal life, categorizing animal dependency into several types. The video explains the concepts of food chains and food webs, providing a description of photosynthesis and examples of simple food chains and webs. The video also describes the ecological role of decomposers and consumers in recycling matter and maintaining balanced populations. After introducing the concept of symbiosis through a simple experiment presented by two students, the video explores different symbiotic relationships that exist, illustrated by visual footage of parasitism, commensalism, mutualism and cooperation. The resource also examines the concept of ecosystem, looking at the disruptive effects that natural disasters and human impact have on existing animal relationships. Finally, the video presents some unexpected relationships that develop between animals in zoos.
Note: A portion of this video overlaps in content with the *Animal Life in Action - Food Chains* video in its narration and visual content.

• *Endangered & Extinct Animals*: This video deals with extinction as a normal endpoint for most organisms. It points out that extinction is generally a gradual process; relatively rapid extinctions like that of the dinosaurs are caused by a sudden climatic change set off by a natural catastrophe. The video goes on to identify human intervention as the main cause for the disappearance of species today, addressing the effects of habitat destruction, chemical pollution and use of pesticides. The video discusses ways of assessing environmental quality, and features a student-narrated segment on the determination of nitrate content in a water sample. The resource finishes with a discussion of laws passed to protect endangered species, and describes ways that people have contributed to the protection of threatened animals, particularly those jeopardized by oil spills.

• *Food Chains*: This video focuses on the concept of energy flow, explaining the process of photosynthesis and providing examples of simple food chains to show how the sun's energy is the source of all life on earth. The video presents both terrestrial and aquatic food chains and shows examples of how the overlapping of food chains leads to food webs. The narration integrates related scientific terms such as producer, primary and secondary consumer, ecosystem, biomass, and energy pyramid. The biochemical role of decomposers is explained, with reference made to specific chemical compounds released by their action. The resource also deals with the pyr[illegible]ds of energy and biomass, human impact on the balance of nature, and the impact of natural disasters on animal populations. The video fi[illegible]es with a student-led experiment to show the progression of microorganisms that appear in a boiled hay infusion.


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LRC Order No.: Est. Price:

## Architecture

***Bill Nye the Science Guy Series***

**Support Resource**

**ACCESS–The Education Station / Regional Resource and Urban Media Centres**

© 1998

**BPN 855287**

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | ✓ | | | | | | | | | | | |

In this video, Bill Nye gives viewers a comprehensive overview of the planning, design, and construction of buildings. His "form follows function" approach encompasses considerations such as location, appearance, materials choice, and the use of scale models. Examples of infrastructure, trusses, arches, domes, geodesic domes, and planning views are given. The program finishes with a look at the melding of science and art in earthquake resistant pagodas.

## The Barrens Quest

**520884 $58.40**

**Support Resource**

© 1997

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | | | | | | |

This video explores the destructive environmental impacts of mineral development in the Northwest Territories, as well as the complex changes that people in the region are now facing. The government's approval process of the Ekati diamond mine is analyzed to identify limitations, and local people are interviewed to present their views on the issues and concerns connected with the mine. These issues are also explored through the story of one man's quest to find the fabled breeding grounds of the Eskimo Curlew, a once common bird that is now near extinction. Through the story of Joachim Obst and others, the video makes an emotionally affecting case for planned conservation in one of the last unspoiled wilderness regions left in the world.

LRC Order No.: Est. Price:

## Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) 434803 $12.00

**Authorized Teaching Resource**

© 2000 **Author(s):** Agban, J. et al.

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

This Canadian edition has been thoroughly revised in light of the *The Common Framework of Science Learning Outcomes* (Council of Ministers of Education Canada, 1997). This safety resource contains advice on such diverse topics as "Making Things," "Testing Things," "Food and Hygiene," "Heating and Burning," "Chemicals," "Electricity," "Animals," "Plants," "Micro-organisms," "Optical Instruments" and "Studies Out of School."

## Burns Bog: A Road Runs Through It 468018 $46.70

**Support Resource**

© 1999

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| ✓ | | | | | | | | | | | | | | |

This 25-minute video explains the bog ecosystem, its species and their interactions and interdependencies. In light of this information, the video then addresses the environmental impact of human activity and encroachment as a cause of species' endangerment.

LRC Order No.: 509771 Est. Price: $130.95

## A Closer Look at Plants (Macintosh / Windows Version)

**Support Resource**

© 2001

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | ✓ | | | | | | | | | | | | | |

This CD-ROM lets users access a wealth of information about non-vascular and vascular plants, including details on plant microanatomy, plant structures, life cycles, and plant processes such as transpiration, photosynthesis, and growth. It also presents a number of plants that are used for food or for medical purposes. The resource contains over 200 images showing 75 species of plants, and includes a ten-minute animation of the process of photosynthesis. A "Topic Locator" is provided, allowing students to find specific information quickly and easily.

## Coral Reefs: Vanishing Treasures (Video and Teacher's Guide)

**Vendor Direct**

**Support Resource**

© 1999

Marlin Motion Pictures Ltd.; 211 Watline Avenue, MISSISSAUGA ON L4Z 1P3

Telephone: 888–260–2232; 905–890–1500 Internet: http://www.marlineducation.com

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | | | | | | |

This video explores human impact on coral reefs around the world. The large variety of plants and animals on healthy reefs is compared to the relative lack of life on reefs destroyed by human activity. From the islands of Palau in the Pacific Ocean to the Florida Keys, local individuals discuss the value of reefs to people in their communities and the changes that have occurred to reefs in their area. It becomes clear why coral reefs are called "vanishing treasures." Local and global initiatives to save coral reefs are explored along with the social dilemmas each initiative faces. This is a great introduction to the study of marine ecosystems and biomes, with an emphasis on conservation, human impact and social issues.

LRC Order No.: 470386 Est. Price: $86.80

## The Digital Field Trip to the Desert (Macintosh / Windows Educational Version 1.2)

***The Digital Field Trips Series***

**Support Resource**

© 2001

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | ✓ | | | | | | | | | | |

In this resource, students are taken on a series of "virtual" field trips to five desert locations in the southwestern United States. As students travel down the trails in each location, they are able to view landscapes from stations along each trail, turn in all directions, and zoom in on plants and animals. Video clips, animations, narrations, games, quizzes and full-colour photographs are used in this interactive resource. Concepts developed include climate, landscape formation, adaptations for plant and animal survival, and homeostasis. The resource includes a 66-page teacher guide, student masters, and one CD-ROM for stand-alone use. Workbook materials are provided in electronic format, allowing teachers to adapt exercises to student needs.

**Note:**

- A site-license version of this resource—allowing unlimited use in one school—is also available from the resource developer.

LRC Order No.: 470427 Est. Price: $86.80

**The Digital Field Trip to the Rainforest** (Macintosh / Windows Educational Version 1.2)

***The Digital Field Trips Series***

**Support Resource**

© 2001

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | ✓ | | | | | | | | | | | | | |

In this resource, students are taken on a "virtual" field trip to Belize, Central America, to experience the sights and sounds of the rainforest. Students are able to view the landscape from a series of stations along a trail, turn in all directions, and zoom in on plants and animals. Video clips, animations, narrations, games, quizzes and full-colour photographs are used in this interactive resource. Concepts developed include interdependence of plants and animals, ecological cycles, and effects of humans on the rainforest ecosystem. The resource includes a 65-page teacher guide, student masters, and one CD-ROM for stand-alone use. Workbook materials are provided in electronic format, allowing teachers to adapt exercises to student needs.

**Note:**

• A site-license version of this resource—allowing unlimited use in one school—is also available from the resource developer.

LRC Order No.: Est. Price:

## The Digital Field Trip to the Wetlands (Macintosh / Windows Educational Version 1.2) 470451 $86.80

***The Digital Field Trips Series***

**Support Resource**

© 2001

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | ✓ | | | | | | | | | | | | | |

In this resource, students are taken on a "virtual" field trip to Algonquin Park in Ontario, to experience the sights and sounds of a bog. Students are able to view the landscape from a series of stations along a trail, turn in all directions, and zoom in on plants and animals. Video clips, animations, narrations, games, quizzes and full-colour photographs are all used in this interactive resource. Concepts developed include tropic levels, nutrient cycles, the formation of bogs, and interactions within the bog ecosystem. The resource includes a 44-page teacher guide, student masters, and one CD-ROM for stand-alone use. Workbook materials are provided in electronic format, allowing teachers to adapt exercises to student needs.

**Note:**

- A site-license version of this resource—allowing unlimited use in one school—is also available from the resource developer.

## Dynamic Earth 467929 $403.30

***National Geographic Geokit Series***

**Authorized Teaching Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | ✓ | | | | | | | | | | |

This comprehensive teaching package teaches students about earthquakes, volcanoes, and the role of plate tectonics in shaping the Earth. Students can view volcanic eruptions and earthquakes; discover how mountain ranges, deep-sea rifts, volcanoes, and earthquakes are created; and learn how plate tectonics relate to natural disasters. The resource also includes explanations and activities to show students how to locate earthquake epicenters and plot volcanoes on the "Ring of Fire." The kit includes three videos, two maps, a class pack of National Geographic magazine articles, four transparencies, student handout/worksheet masters, and trivia cards. The teacher's guide offers hands-on activities and Internet exercises to actively engage students in their own learning. Assessment options are also provided.

LRC Order No.: 470493 Est. Price: $72.95

**Dynamic Earth: NGS Picture Pack Transparencies** (includes Teacher's Guide and 40 Transparencies)

***NGS Picture Pack Series***

**Authorized Teaching Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | ✓ | | | | | ✓ | | | | | |

This teacher resource provides a set of 40 transparencies that show evidence of the dynamic Earth, including illustrations of folding, faulting, volcanoes, plate movements, mountain formation, glaciation, erosion and deposition. The illustrations consist mainly of photographs, but artwork depicting and explaining crustal movements is also included. A teacher's guide provides a paragraph of background information on each transparency and briefly outlines six mini-lessons that are based on use of the transparencies.

**Earth's Endangered Environments** (Macintosh / Windows Version) **511007 $109.90**

***NGS PictureShow Series***

**Support Resource**

© 1994

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | | | | | | |

This CD-ROM provides two 12-minute narrated picture sequences that describe endangered environments. "Rainforests" and "Wetlands" each provide images of a wide range of living things and identify problems that have led to habitat destruction. The CD-ROM also includes brief sections of Student Information, Classroom Activities, and Assessment Questions.

**Note:**

• The limited scope of these additional sections and technical limitations in navigating the CD-ROM are weaknesses in this otherwise useful resource.

LRC Order No.: 467911 Est. Price: $182.95

## Ecology (Macintosh Version 1.0 / Windows Version 1.1)

***Biology Concepts Series***

**Support Resource**

© 1997

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | | | | | | |

This CD-ROM program explores a number of fundamental ecological concepts that provide a foundation for understanding the natural world. The program consists of four units. Unit 1 provides an overview of the relationships of living things with their environment. It covers the concepts of ecosystem, community, population, habitat and niche. Unit 2 looks at nature's cycles and ecological succession. Unit 3 explores the interrelationships of organisms, with a major focus on the producer-consumer-decomposer relationship and the three types of consumers: herbivores, carnivores and omnivores. Unit 4 explores the more common biomes of the earth with their characteristic climates, plants and animals. Each unit includes a video clip providing visual examples of the concepts and details discussed. The program also includes a section on video vocabulary, inquiries of three specific ecological topics, and a final review.

## Farming

***Bill Nye the Science Guy Series***

**Support Resource**

**ACCESS–The Education Station / Regional Resource and Urban Media Centres**
**BPN 855281**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | ✓ | | | | | | | | | | | | | |

In this video, Bill Nye provides the big picture of what farming is about, reminding viewers that most of our food comes from farms. Nye provides a quick survey of techniques used for planting, enhancing growth and harvesting, using a variety of crops as examples. The video then describes soil contents and soil fertility, emphasizing what makes soil fertile. This leads into a brief segment on organic farming and techniques for managing soil and water.

**Note:**

- Nye describes farming as a "science" rather than a technology.


© Alberta Learning, Alberta, Canada

LRC Order No.: 467846 Est. Price: $23.40

## FEESA: Video Tour Part 2 (Forestry Field Trip)

**Support Resource**

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| ✓ | ✓ | | | | | | | | | | | | | |

In this video two narrators guide the viewer through a series of short "field trips" that introduce the viewer to some applications of forest study and forest technology in Alberta. The video contains four sequences, each set up as a separate section with its own introduction and wrap-up.
1. "Fire in the Forest" - Origins of forest fires, fire detection and fire control are shown within an Alberta context, with emphasis on the technologies involved. The role of fire within the cycle of forest life is also described.
2. "Understanding the Forest" - Techniques for study, inventory and research on living things found in forest lands are described. Examples of quantitative measures are shown: studies of tree growth, population counts, measures of age and range.
3. "Wood Products" - Use of aspen poplar trees in the manufacture of oriented strand board and medium density fibreboard is described and illustrated.
4. "Changes in the Forest" - Factors that lead to change in forests are described, including tree diseases, insect pests, severe weather, and human actions leading to tree cutting.

## The Food Chain

LRC Order No.: 479015 Est. Price: $57.30

***Animal Life and Beyond Series***

**Support Resource**

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| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | | | | | | |

This video describes the process of converting solar energy to the energy in food, and the further transfer of energy through food chains. Key steps in photosynthesis are explained and illustrated through animations. Food pyramids and trophic levels are illustrated using a variety of animal examples.


© Alberta Learning, Alberta, Canada

LRC Order No.: 520876 Est. Price: $46.70

## Footprints in the Delta

**Support Resource**

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| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | | | | | | |

This video tells the story of how the W.A.C. Bennett hydro-electric dam has altered the ecosystem in the Peace-Athabasca River delta region. Since the building of the dam in 1967, the area's lakes and wetlands have dried up significantly, with disastrous impacts on the vegetation and wildlife of the region. The decline in the muskrat population in particular has had critical effects on the Aboriginal community of Ft. Chipewyan, which supported itself through the fur industry. Scientists and aboriginal people are interviewed to give their perspectives on what has happened. Satellite images, aerial views and ground level photography provide visual evidence of the ecological changes, while animation and photography help explain why they have occurred. The video is a thought-provoking look at what happens when major projects are undertaken without any environmental impact studies.

## Formations of Continents and Mountains

***Basics of Geology Series***

**Support Resource**

**Vendor Direct**

© 1998

Marlin Motion Pictures Ltd.; 211 Watline Avenue, MISSISSAUGA ON L4Z 1P3

Telephone: 888–260–2232; 905–890–1500 Internet: http://www.marlineducation.com

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| | | | | ✓ | | | | | | | | | | |

The dynamic nature of the earth's crust is clearly presented in this two-part video. With the use of a model and animation, the earth's internal layers are described and correlated to volcanic activity, earthquakes, mountain formation, and continental drift. A history of the earth's crust is presented, starting with the volcanic origin of the continents followed by the gradual shift of the earth's plates from the supercontinent Pangea to their present positions. Sea floor spreading, subduction, thrusting, folding and faulting, and mountain formation are explored within the framework of the Plate Tectonics Theory. With the use of animations, the video effectively explains the cause of volcanoes and earthquakes. The resource concludes with a summary of main ideas and a set of review questions.

LRC Order No.: Est. Price:

## Fossils

***Bill Nye the Science Guy Series***

**Support Resource**

**ACCESS–The Education Station / Regional Resource and Urban Media Centres**

**BPN 855285**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| | | | | ✓ | | | | | | | | | | |

In this video, Bill Nye is joined by field geologists to explain what fossils are and how they are formed. Nye shows how fossil evidence, together with our knowledge of present life forms, provides images of life in the past, including rhinoceroses, ferns, fish, trilobites, dinosaurs and birds. The process of fossil formation is shown through animations, and through a mold-and-cast activity that students can try on their own.

**Note:**

• The video uses humorous commercial messages and a rock music segment to convey information in an engaging manner. Some teachers may find this style too tongue-in-cheek.

## Geology Explorer (Windows / Macintosh Version)

**523028 $92.60**

***Earthstation Library Series***

**Authorized Teaching Resource**

© 2000

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | ✓ | | ✓ | | | | | ✓ | | | | | |

*Geology Explorer* is a multimedia study of planet Earth from core to crust. Lessons cover topics such as rocks and minerals, weathering and plate tectonics, all through the perspective of earth scientists. The resource contains approximately 600 MB of educational content, including hundreds of photographs, detailed captions and text, digital video, 3D animations, charts, music, sound effects, and narration. In addition, the CD-ROM includes interactive exercises and projects such as virtual experiments, demonstrations, mini-games and puzzles. Multiple choice tests, a sample lesson on plate tectonics, an extensive glossary and a connection to EOA Scientific Systems Inc.'s *Earth Station Internet Campus* are included. A teacher's manual and user's guide are also provided on the CD-ROM.

LRC Order No.: Est. Price:

## Great Northern Forest

**Support Resource**

**ACCESS–The Education Station / Regional Resource and Urban Media Centres**

**BPN 840201**

© 1994

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| ✓ | | | | | | | | | | | | | | |

This video explores one of the great biomes of our planet, the boreal forest. The video follows the activity in the forest through the four seasons. It provides a good overview of the species that exist in this vast forest region and the adaptations they have developed to survive in the harsh climate that characterizes this part of the world. This video could be used as an effective springboard to discussing ecological concepts connected with the Interactions and Ecosystems unit.

**479023 $57.30**

## Heat and Living Beings

***Animal Life and Beyond Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | ✓ | | | | | | | | | | | | |

This video explores various ways that plants and animals adapt to different temperature conditions in the natural environment. Examples of ectomorphs (cold-blooded animals) and endomorphs (warm-blooded animals) are shown, as well as adaptations occurring in a variety of plant species. Structural and behavioural adaptations covered in the video include surface covering, size, shape, distribution in the environment, and movements during the day. The concept of plant succession is also briefly introduced.


© Alberta Learning, Alberta, Canada

LRC Order No.: 468026 Est. Price: $46.70

## Horses of Suffield

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | | | | | | |

This video describes the fragile grassland area in Southern Alberta and the inability of the area to support the wild horses that lived there. It then presents the controversy that surrounded the removal of the horses from the area.

## Human Body 1: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)

LRC Order No.: 467953 Est. Price: $91.20

***NGS Picture Pack Series***

**Authorized Teaching Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | ✓ | | | ✓ | | | | | | | | |

This resource is a visual library of images illustrating several human body systems. It explains the basic components and functions of the skeletal, muscular, nervous, and endocrine systems. The kit includes 40 overhead transparencies and a teacher's guide with captions and activities.

LRC Order No.: Est. Price:

## Human Body 1: Picture Show CD-ROM (Macintosh / Windows Version 4.0) 467979 $87.90

***NGS PictureShow Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | ✓ | | | ✓ | | | | | | | | |

This CD-ROM consists of two self-contained shows that introduce the basic components and functions of the skeletal, muscular, nervous, and endocrine systems. In "Bones and Muscles," students can explore the skeletal framework that supports the body and the muscular system that allows the body to move and manipulate objects. In "Nervous and Endocrine Systems," they can discover the complex communication systems that link and control all the body functions and give us the ability to think and create. The resource also explains how these systems gather information through our senses, analyze the information, and then take action. This resource includes more than 100 images, music, narration and read-along text, a student guide, classroom activities and a user's guide.

## Marine Life 479031 $57.30

***Animal Life and Beyond Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | ✓ | | | | | |

This video describes the diversity of living things found in ocean environments. Examples of pelagic organisms (surface dwelling and free swimming) and benthic organisms (bottom dwelling) are shown. Key features of marine environments are described, and adaptations to those environments are illustrated and explained.

LRC Order No.: 513342 Est. Price: $34.95

## Molecular Motion

***Science Key Concepts: Physics / Chemistry Series***

**Support Resource**

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | ✓ | | | | | | | | | | | | |

This video looks at molecular motion and its effects on matter. The kinetic theory of matter is explained and applied to changes in state of matter, Brownian Motion and diffusion. The direct relationship between temperature and kinetic energy of ions and molecules is shown, as well as the inverse relationship between size of the particles and rate of diffusion. The effects of pressure on gases is also explored.

510950 $115.75

## Oceans: Charting the Vastness

***Survey of Science: Earth Science Essentials Series***

**Support Resource**

© 1996

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | ✓ | | | | | ✓ | | | | | |

Oceans cover over 70% of the earth's surface and have a significant influence on the planet's geology, life, and climate. This video explores the geology of the ocean floor, the composition of ocean water, the dynamics of ocean currents and tides, the formation of shoreline features, and the influence of the ocean on weather patterns. Effective animation is used to illustrate tide formation. The video also outlines the diversity of marine life in tidal pools, estuaries, kelp forests, and around deep sea vents. The video closes with a look at oil, gas and other resources and their extraction from below the sea.

LRC Order No.: 472134 Est. Price: $92.60

## Oceans - Climate Explorer (Windows / Macintosh Version)

***Earthstation Library Series***

**Authorized Teaching Resource**

© 2000

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | ✓ | | | | | |

This interactive multimedia resource focuses on oceanography and meteorology, providing a comprehensive exploration of the relationships between water and Earth's climate. Over 600 MB of exercises, images, videos, games, experiments, demos and puzzles are included in the program. The video clips cover topics ranging from the structure of the ocean to human activities and climate. An extensive glossary is also provided.

**Note:**

- This is a resource for teachers, but is also suitable as a reference source for more advanced students.

## People and Plants (with Teacher's Guide)

LRC Order No.: 513334 Est. Price: $34.95

***The World of Plants Series***

**Authorized Teaching Resource**

© 2000 **Author(s):** Colgren, J.; Fuqua, P. (Teacher 's Guide)

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | ✓ | | | | | | | | | | | | | |

This 10-minute video, with five minutes of quiz, introduces students to various uses of plants in our lives. The video describes, in a visually pleasing manner, human uses of plants as sources of food, medicine and raw materials. The narration, however, is directed at a much younger audience in terms of pacing and vocabulary. A teacher guide accompanies the video and allows for extension activities as well as assessment of student understanding.

LRC Order No.: 485509 Est. Price: $232.65

**Photosynthesis: Light into Life** (Videocassette with Teacher's Guide)

**Authorized Teaching Resource**

© 1997

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | ✓ | | | | | | | | | | | | | |

This video explores the role of plants as natural solar collectors, converting solar energy into a usable form for themselves and all other life forms. The video uses colour animation, live-action photography and diagrams to enhance visual learners' understanding of photosynthesis as well as the energy releasing process of cellular respiration. Chemical equations for both processes are reviewed and the importance of glucose and oxygen are highlighted. The video examines leaf and chloroplast structure to show the role of chlorophyll and other pigments in trapping sunlight. Both light and dark reactions are explained with an appropriate amount of biochemistry. The teacher's guide provides a program summary and student activities.

| | LRC Order No.: | Est. Price: |
|---|---|---|
| • **Plant Biodiversity** | **479247** | **$76.00** |
| • **Plant Reproduction** | **479255** | **$76.00** |
| • **Plant Structure and Growth** | **479263** | **$76.00** |
| • **Plants & People: A Beneficial Relationship** | **479271** | **$76.00** |

***Plant Life in Action Series***

**Support Resource**

© 2000

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | ✓ | | | | | | | | | | | | | |

• *Plant Biodiversity*: This video explains the origins and evolution of plant species, emphasizing the wide variety of habitats that plants have adapted to, the structures that different plants have developed to succeed in their environments, and the effects of climate on plant diversity. The resource also explores the differences between vascular and nonvascular plants, explains how the development of seeds allowed plants to dominate the landscape, and identifies some differences between cone-bearing gymnosperms and flowering angiosperms.

• *Plant Reproduction*: This video explores the many different features that plants have developed in order to survive and reproduce. The resource explains how primitive mosses and algae are dependent upon water for their reproduction, and how the rise of fruit-bearing angiosperms as the dominant plants on Earth is due to the evolutionary success of flowers as a reproductive feature. Diagrams and microscopic photography illustrate the structures involved in flower pollination, beginning with the transfer of pollen from stamen to pistil and continuing through the development of seeds and fruit. A hands-on experiment suitable for the classroom also allows students to explore the concept of vegetative propagation and the benefits of this type of reproduction.

• *Plant Structure and Growth*: This video explains how plant cells are organized to form specialized tissues like xylem and phloem. Using diagrams and microscopic photography, the video illustrates how plant structures form systems that support plant growth. The resource then describes the movement of water, minerals and food through a plant's systems. A hands-on activity to investigate geotropism and observe how plants react to their environment is included.

• *Plants & People: A Beneficial Relationship*: This video explores how plants and animals interact, cooperate and compete, highlighting how the constant exchange of nutrients and gases between plants and animals assures their interdependency. The video explains how animals are vital to the reproductive process of many plants and how animals rely on plants for food and shelter. The resource also includes a hands-on experiment exploring how plants depend upon animals for pollination and whether or not a flower's colour is responsible for reproductive success.


© Alberta Learning, Alberta, Canada

## Plant Reproduction

LRC Order No.: 478306 Est. Price: $192.90

*Plant World Series*

**Support Resource**

© 2000

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| | ✓ | | | | | | | | | | | | | |

Using vivid images and engaging animations, this program describes how plants reproduce. The video addresses the wide variety of reproductive strategies found in different types of plants including both seedless and seed plants, as well as asexual and sexual forms of reproduction. Colourful animations are used to illustrate seed fertilization and development. Some of the terminology discussed includes spores, alternation of generations, cones, flower, ovule, pollen, pollination, sepal, petal, stamen, pistil, fertilization, and growth.

## Plant Structure and Function

478281 $192.90

*Plant World Series*

**Support Resource**

© 2000

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | ✓ | | | | | | | | | | | | | |

In this program, students will learn how the structures of plants enable them to live and grow. Referring to a wide variety of plants, structures such as roots, stems, and leaves are explored in detail. Real-life applications illustrate how these plant structures are useful sources of food, building materials and medicine. The video highlights how plant structures play important roles in plant survival. Terminology and concepts conveyed in the video include roots, stems, xylem, phloem, leaf, stomata, guard cells, growth, photosynthesis and respiration.


© Alberta Learning, Alberta, Canada

LRC Order No.: 467937 Est. Price: $403.30

## Plants

***National Geographic Geokit Series***

**Authorized Teaching Resource**

© 1999

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| | ✓ | | | | | | | | | | | | | |

This resource allows students to explore the diverse world of plants, from everyday foods to forgotten crops. Through hands-on activities, vivid transparencies, and engaging videcs, the resource teaches how plants work, what they need to survive and how they obtain these requirements, how they help us breathe, and how they grow and reproduce. The videos include a presentation on the delicate relationship between plant and pollinator, a visit to a garden specifically designed to attract butterflies, and a trip to a rainforest to see what global threats mean on a personal level. Maps, articles and Internet activities enable further exploration of various topics, including the many uses of herbs, the economic importance of corn throughout history, and the dangers now facing plants around the globe. The kit also includes a set of student handouts, assessment options, and a teacher's guide.

## Plants: What it Means to be Green (Macintosh / Windows Version 3.0)

**510984 $109.90**

***NGS PictureShow Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | ✓ | | | | | | | | | | | | | |

This CD-ROM provides two 12-minute narrated picture sequences that describe the structure and function of green plants. "Roots, Stems and Leaves" describes plant photosynthesis, showing, in simplified form, how water and carbon dioxide are broken down into elements that are then recombined to form glucose. This sequence also shows how root, stem and leaf structures each play a role in food manufacture. "X-treme Survival" explores adaptations in flower structure and seed production. The CD-ROM also includes brief sections of Student Information, Classroom Activities, and Assessment Questions.

**Note:**

• The limited scope of these additional sections and technical limitations in navigating the CD-ROM are weaknesses in this otherwise useful resource.

LRC Order No.: 482191 Est. Price: $70.10

## Plate Tectonics: Earthquakes, Volcanoes and Mountains (Video and Guide)

***Earth Science Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | ✓ | | | | | | | | | | |

This video describes the composition of the earth's interior; differences between continental crust and oceanic crust; and various plate motions and how these affect earthquakes, volcanoes and mountains. The video uses a graphic model and animation sequences to explain and illustrate concepts and topics, including the formation of Surtsey Island in the Atlantic and the formation of row volcanoes and row islands along converging plates. Dramatic footage of volcanic eruptions is also included. The movement of plates along the San Andreas Fault is analyzed to account for past earthquakes and to make projections of land positions in the future. A formal style of presentation is used, with emphasis on scientific facts and detail.

## Pollution

**510992 $403.30**

***National Geographic Geokit Series***

**Authorized Teaching Resource**

© 1997

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | | | | | | |

Pollution is a growing threat to the environment and the earth's life support system. *Geo-Kit Pollution* explores the scientific basis and social causes of this global problem. Contamination of the air, water, and soil are all investigated and analyzed, showing sources of pollution, the effects, and what has been done to alleviate the impact. The resource shows that we are all part of the environmental solution through recycling, conservation, and wise use of resources. The kit consists of three videos, a teacher's guide, articles on "Pollution in the Everglades and Europe" and "Recycling," as well as maps and posters.

LRC Order No.: 480905 Est. Price: $76.00

## Properties of Matter

***Physical Science in Action Series***

**Support Resource**

© 2000

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | ✓ | | | ✓ | | | | | | | | | |

This resource explores the physical properties of matter through the format of a young student on a field trip presenting what she has learned. The video first explains the concepts of matter and the atom. Once this foundation is established, the resource investigates phases of matter (explained in terms of atomic arrangement and movement of particles) and how matter behaves in the natural world. Physical properties of matter—such as mass, weight, volume and density—are presented. Common applications of density differences, such as hot air balloons, are identified. Important concepts and terms are defined and described through graphics and interpretive animations. Demonstrations are also used to illustrate concepts: for example, how density causes one liquid to float on another and how this can reverse with temperature change.

## Rocks and Minerals: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)

LRC Order No.: 470500 Est. Price: $91.20

***NGS Picture Pack Series***

**Authorized Teaching Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | ✓ | | | | | | | | | | |

This teacher resource consists of 40 transparencies showing the diversity of rock and mineral forms found on Earth's surface. Close-up photographs of rock and mineral specimens are complemented by macro views of rock formations and artwork that shows how rocks form. Two transparencies are included on rocks from space, and several show the mining and use of minerals. A 12-page teacher's guide provides a background paragraph for each transparency and briefly outlines six mini-lessons based on use of the transparencies.

| | LRC Order No.: | Est. Price: |
|---|---|---|
| • **ScienceFocus 7 (Student Text)** | **449703** | **$67.45** |
| • **ScienceFocus 7: Teacher's Resource Binder** (with Blackline Masters on CD-ROM) (Macintosh / Windows Version) | **449711** | **$237.50** |
| • **ScienceFocus 7: Illustrations CD-ROM** (Macintosh / Windows Version) | **451857** | **$174.50** |
| • **ScienceFocus 7: Teacher's Productivity Package** (Macintosh / Windows Version) | **508418** | **$149.35** |

***ScienceFocus 7: Science • Technology • Society Series***

**Basic / Authorized Teaching Resource**

© 2001 **Author(s):** Gue, D. et al.

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | |

This student book and teacher's resource binder provide direct support for the Alberta program of studies for Grade 7 Science. Together these resources provide a very extensive set of learning activities, and background readings for students and teachers. Numerous Canadian and Alberta examples are provided. The student text includes preview and review sections with each chapter, a science skills guide and a glossary of key terms. The teacher resource includes general sections on science safety, student assessment, course materials, and blackline masters, as well as detailed unit guides including an introduction, teacher background and instructional suggestions.

## The Scientific Method

**510976** **$92.35**

**Support Resource**

**ACCESS–The Education Station / Regional Resource and Urban Media Centres**

© 2000

**BPN 2065501**

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |

This resource presents nine steps in developing a theory using scientific method, and defines and explains different types of variables. Three individual investigations are used to show the scientific method in practice and highlight the individual steps. Pacing, examples and graphics are appropriate for a junior high audience. This resource could be used at the beginning of each unit of study to reintroduce students to the scientific method.

LRC Order No.: 467995 Est. Price: $46.70

## Sea Otters

***Champions of the Wild Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | | | | | | |

This video presents a historical look at the sea otter, from its near-extinction due to over-hunting at the turn of the 20th century to its amazing return today through both natural processes and translocation programs to re-introduce the species to various sites of their natural habitat. The resource shows the effects of losing a valuable member of an ecosystem, and explains how re-introduction can bring the ecosystem back to normal.

## The Skeletal System (2nd Ed. Revised)

LRC Order No.: 467820 Est. Price: $57.30

***Human Body Series***

**Support Resource**

© 1993

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | ✓ | | | | | | | | | | | |

This video presents a general description of the human skeletal system and how it functions. Detailed animation and X-ray motion pictures trace the structure of the skeleton from head to foot, examining the bones in each region of the body and their contribution to the body as a whole. Additional animation and scenes of sports activities demonstrate the workings of different kinds of joints and their individual strengths and weaknesses.

LRC Order No.: 468000 Est. Price: $46.70

## St. Lawrence River Belugas

***Champions of the Wild Series***

**Support Resource**

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| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| ✓ | | | | | | | | | | | | | | |

This video presents a history of beluga whales and how they interact with their environment in the St. Lawrence Seaway. The video traces the beluga from the turn of the century, when belugas were blamed for declining cod stocks, to the present day, when they are on the comeback from extinction. The video also discusses how toxins from nearby industries have impacted the beluga population, and how the increasing number of belugas suggests that clean-up efforts are working.

## Succession

482175 $70.10

**Support Resource**

© 1994

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | | | | | | |

This resource presents biological succession as it occurs on a Lake Erie sand spit. The resource tells the story of the spit, beginning with the formation of the spit and an explanation of the forces that help shape it over time. The biological succession that follows starts with pioneer plants, including the russian thistle and seaside spurge, which stabilize the shifting sand and gradually make conditions suitable for a host of other plants and associated animals. The appearance of the cottonwood marks the beginning of another stage in the process, which ultimately leads to the climax community of cherry, oak, maple and hemlock trees. The resource combines a traditional narration style with extensive photography of the spit, as well as some animation sequences.

LRC Order No.: 510942 Est. Price: $57.30

## Symbiosis: Nature's Delicate Balance

**Support Resource**

© 1995

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | | | | | | |

Go on a quick tour of the world to see how human activity has imposed changes on the environment. Such changes have occurred throughout human history, many with long lasting effects still visible today. This video explores our relationship with the environment and how environmental changes produced by our interaction often have negative effects. The analysis leads the viewer to realize that we must change our ways to provide for better management of soils, toxic wastes and forests.

## Turning Down the Heat: The New Energy Revolution

468034 $46.70

**Support Resource**

© 1999

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | ✓ | | | | | | | | | | | | |

This video looks at the global impact of the burning of fossil fuels, providing concrete examples of the dangers of global warming. Examples of various renewable resource energy projects are profiled as economically viable solutions to these problems. Each section of the resource deals with a different power source, citing examples of the ways that various countries utilize it. Examples include solar energy projects in Holland, Japan, and California; biogas energy in Denmark and Vietnam; wind energy in Holland and India; and hydrogen fuel cells and ground source heat in Vancouver. The resource uses grade-appropriate vocabulary, and focuses on the economics of energy use and production in addition to environmental factors.

**Note:**

- Some portions of the video may be interpreted as portraying the Canadian government as being strongly pro-oil.

LRC Order No.: 467797 Est. Price: $46.70

## Volcano

***Eyewitness Series***

**Support Resource**

© 1996

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | ✓ | | | | | | | | | | |

This video, part of a series based on the EYEWITNESS books, provides students with live action photography and video footage of volcanoes and earthquakes. The program explains how and why volcanoes are formed, their destructive effects, and their role in creating new rocks and land. Students will learn how volcanoes and earthquakes are measured, the myths surrounding them, and how they have affected human life throughout history. The process of making the film and the use of special effects are presented at the end of the program. The video would be best used as an introduction, extension or summary.

## Water Erosion and Landforms (Video and Guide)

LRC Order No.: 482183 Est. Price: $70.10

***Earth Science Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | ✓ | | | | | ✓ | | | | | |

This video looks at water as the most powerful erosional force on Earth. The video begins with a distinction between weathering and erosion, leads into an animated description of the water cycle, then examines the erosion processes associated with glaciers, streams and rivers, and waterfalls. It presents some interesting visual examples of land forms shaped by water action and, with the use of effective animations, provides an interpretive explanation of their formation. The formation of V-shaped valleys of young rivers is explained, as is the formation of meanders and oxbow lakes connected with more mature streams. Some attention is given to sediment, floods, flood plains, as well as various means of controlling flooding. A summary of the major points and a final note about the constant evolution of land forms complete the video.

LRC Order No.: Est. Price:

## What Are Glaciers? 467838 $57.30

***Earth, the Environment and Beyond Series***

**Support Resource**

© 1992

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | ✓ | | | | | ✓ | | | | | |

This video introduces what a glacier is and how it forms, describes how and where glaciers move, and presents the history of glaciers. It also describes the effects of glacial erosion and the landform it creates.

## What Are Volcanoes? 467812 $57.30

***Earth, the Environment and Beyond Series***

**Support Resource**

© 1992

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | ✓ | | | | | | | | | | |

This video provides a thorough explanation of volcanoes and volcanic action. It explores the origins of volcanoes, describes different types of volcanoes, and explains eruption processes. It also shows the location of volcanoes along the tectonic plates.

**Note:**

- Distances are given in miles rather than kilometers.

LRC Order No.: 511966 Est. Price: $29.20

## Why Wetlands? Education Kit

**Authorized Teaching Resource**

© 1994

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | | | | | | |

This resource lets students take a close look at what makes up a wetland ecosystem, discover the kinds of wetlands that exist, and understand why we should protect them. The kit provides extensive information about ecosystems, with a focus on the four wetland types in Ontario: marshes, swamps, bogs and fens. The resource explains the importance of these areas as vital habitats to hundreds of plant and animal species, some of which are endangered, as well as their role in maintaining water quality and water storage. It also explores why nearly 85% of wetland areas no longer exist, and what can be done to preserve what is left. The kit consists of 20 lessons and classroom-ready activities with student handouts. Also included are fact sheets on species at risk, "Life in an Ontario Wetland" and other posters, games and resource listings.

**478299 $192.90**

## The World of Plants

***Plant World Series***

**Support Resource**

© 2000

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | ✓ | | | | | | | | | | | | | |

This video explores the great diversity of the plant world in order to answer the basic question "What makes a plant a plant?" The video describes the early history and origins of plants, and highlights the defining characteristics of nonvascular and vascular plants. Bryophytes, spore-producing plants, gymnosperms, and angiosperms are illustrated and explained using vivid images and colourful animation. The terminology and concepts discussed include algae, angiosperms, gymnosperms, bryophytes, cell wall, chlorophyll, photosynthesis, vascular and nonvascular.


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# ALBERTA AUTHORIZED RESOURCE LIST and ANNOTATED BIBLIOGRAPHY

## Grade 8 Science

Alberta
LEARNING
Learning and Teaching Resources Branch

# GRADE 8
## Units A, B, C, D, E

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Basic Learning Resources** | | | | |
| ***Addison Wesley Science in Action 8 Series*** | | | | |
| Addison Wesley Science in Action 8 (Student Text)<br>*Addison Wesley Science in Action 8 Series* | 2001 | **Basic**<br>8A / 8B / 8C / 8D / 8E | 449670 | $68.30<br>LRC |
| Addison Wesley Science in Action 8: Teacher's Resource Package<br>*Addison Wesley Science in Action 8 Series* | 2001 | Authorized Teaching<br>8A / 8B / 8C / 8D / 8E | 449696 | $243.05<br>LRC |
| ***ScienceFocus 8 Series*** | | | | |
| ScienceFocus 8: Science • Technology • Society (Student Text)<br>*ScienceFocus 8 Series* | 2001 | **Basic**<br>8A / 8B / 8C / 8D / 8E | 449729 | $67.45<br>LRC |
| ScienceFocus 8: Science • Technology • Society: Illustrations CD-ROM (Macintosh / Windows Version 4.0)<br>*ScienceFocus 8 Series* | 2001 | Authorized Teaching<br>8A, 8B, 8C, 8D, 8E | 451881 | $174.50<br>LRC |
| ScienceFocus 8: Science • Technology • Society: Teacher's Productivity Package (Macintosh / Windows Version 4.0) (includes Teacher's Resource; Blackline Masters; Illustrations)<br>*ScienceFocus 8 Series* | 2001 | Authorized Teaching<br>8A, 8B, 8C, 8D, 8E | 508400 | $149.35<br>LRC |
| ScienceFocus 8: Science • Technology • Society: Teacher's Resource Binder (with Blackline Masters on CD-ROM) (Windows/Macintosh)<br>*ScienceFocus 8 Series* | 2001 | Authorized Teaching<br>8A / 8B / 8C / 8D / 8E | 449737 | $237.50<br>LRC |


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# GRADE 8

## Unit A - Mix and Flow of Matter

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Support Learning Resources** | | | | |
| Mixtures and Solutions (Video; Teacher's Guide; Pre-Test; Post-Test)<br>*Physical Science Series* | 1998 | Support<br>8A<br>(Marlin Motion Pictures Ltd.) | | Vendor Direct |
| Properties of Matter<br>*Physical Science in Action Series* | 2000 | Support<br>7C / 8A | 480905 | $76.00<br>LRC |
| The Scientific Method | 2000 | Support<br>7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E | BPN 2065501 | ACCESS–The Education Station |
| **Authorized Teaching Resources** | | | | |
| NEW Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) | 2000 | Authorized Teaching<br>General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E | 434803 | $12.00<br>LRC |
| Solutions | 1990 | Authorized Teaching<br>8A | 414780 | $24.55<br>LRC |


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# GRADE 8
## Unit B - Cells and Systems

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Support Learning Resources** | | | | |
| The Cell<br>*Microorganisms Series* | 2001 | Support<br>8B | 480038 | $192.90<br>LRC |
| Cell Processes<br>*Microorganisms Series* | 2001 | Support<br>8B | 480046 | $192.90<br>LRC |
| NEW Cells: The Building Blocks of Life<br>*Survey of Science: Biology Essentials Series* | 1996 | Support<br>8B | BPN 2065601 | ACCESS–The Education Station |
| Cells and Tissues<br>*Science Key Concepts: Biology Series* | 1998 | Support<br>8B | 478273 | $70.10<br>LRC |
| Human Body 1: Picture Show CD-ROM (Macintosh / Windows Version 4.0)<br>*NGS PictureShow Series* | 1998 | Support<br>7D / 8B | 467979 | $87.90<br>LRC |
| Human Body 2: Picture Show CD-ROM (Macintosh / Windows Version 4.0)<br>*NGS PictureShow Series* | 1998 | Support<br>8B | 467987 | $87.90<br>LRC |
| Introducing the Cell | 1995 | Support<br>8B | 510934 | $104.05<br>LRC |
| Microscopic Life Forms<br>*Animal Life and Beyond Series* | 1998 | Support<br>8B | 479049 | $57.30<br>LRC |
| Respiration<br>*Our Human Body Series* | | Support<br>8B | 479221 | $57.30<br>LRC |
| The Scientific Method | 2000 | Support<br>7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E | BPN 2065501 | ACCESS–The Education Station |
| **Authorized Teaching Resources** | | | | |
| NEW Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) | 2000 | Authorized Teaching<br>General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E | 434803 | $12.00<br>LRC |
| Human Body 1: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)<br>*NGS Picture Pack Series* | 1998 | Authorized Teaching<br>7D / 8B | 467953 | $91.20<br>LRC |
| Human Body 2: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)<br>*NGS Picture Pack Series* | 1998 | Authorized Teaching<br>8B | 467961 | $72.95<br>LRC |
| Human Body I: Circulatory, Respiratory, Digestive, and Immune Systems<br>*National Geographic Geokit Series* | 1997 | Authorized Teaching<br>8B | 467945 | $403.30<br>LRC |
| The World of Living Things (with Teacher's Guide)<br>*Biology: The Science of Life Series* | 2001 | Authorized Teaching<br>8B | 513368 | $34.95<br>LRC |


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# GRADE 8
## Unit C - Light and Optical Systems

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Support Learning Resources** | | | | |
| The Scientific Method | 2000 | Support<br>7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E | BPN 2065501 | ACCESS–The Education Station |
| Waves (Video and Guide)<br>*Science Key Concepts: Physics Series* | 1998 | Support<br>8C | 482208 | $70.10<br>LRC |
| **Authorized Teaching Resources** | | | | |
| NEW Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) | 2000 | Authorized Teaching<br>General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E | 434803 | $12.00<br>LRC |
| Light and Optics: from Lenses to Polarisation: Containing over 16 Fully Interactive Simulations (Windows Version)<br>*Physics Simulation Series* | 2001 | Authorized Teaching<br>8C | | LRC |
| | | Light and Optics (Single User) | 469818 | $88.85 |
| | | Light and Optics (5-User Labpack) | 469826 | $177.70 |


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# GRADE 8
## Unit D - Mechanical Systems

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Support Learning Resources** | | | | |
| NEW Energy Machines and Motion: Student Guide and Source Book<br>*Science and Technology Concepts for Middle Schools Series* | 2000 | Support<br>8D / 9D | 522335 | $178.55<br>LRC |
| The Scientific Method | 2000 | Support<br>7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E | BPN 2065501 | ACCESS–The Education Station |
| **Authorized Teaching Resources** | | | | |
| NEW Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) | 2000 | Authorized Teaching<br>General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E | 434803 | $12.00<br>LRC |
| NEW Energy Machines and Motion: Teacher's Guide<br>*Science and Technology Concepts for Middle Schools Series* | 2000 | Authorized Teaching<br>8D / 9D | 522343 | $319.85<br>LRC |
| NEW Simple Machines (Videocassette with Teacher's Guide)<br>*Motion, Energy and Force Series* | 2000 | Authorized Teaching<br>8D | 485492 | $192.90<br>LRC |


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# GRADE 8

## Unit E - Freshwater and Saltwater Systems

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Support Learning Resources** | | | | |
| Erosion<br>*Bill Nye the Science Guy Series* | 1998 | Support<br>8E | BPN 855286 | ACCESS–The Education Station |
| Lakes & Ponds<br>*Bill Nye the Science Guy Series* | 1998 | Support<br>8E | BPN 855289 | ACCESS–The Education Station |
| Marine Life<br>*Animal Life and Beyond Series* | 1998 | Support<br>7A / 8E | 479031 | $57.30<br>LRC |
| Oceans: Charting the Vastness<br>*Survey of Science: Earth Science Essentials Series* | 1996 | Support<br>8E | 510950 | $115.75<br>LRC |
| Pond & River<br>*Eyewitness Series* | 1996 | Support<br>8E | 467804 | $46.70<br>LRC |
| The Scientific Method | 2000 | Support<br>7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E | BPN 2065501 | ACCESS–The Education Station |
| Water Erosion and Landforms (Video and Guide)<br>*Earth Science Series* | 1998 | Support<br>7E / 8E | 482183 | $70.10<br>LRC |
| Wetlands Ecosystems II: Interactions and Ecosystems: Student Journal: Middle School Science Grades 7 to 8 | 1999 | Support<br>8E | 415481 | $7.00<br>LRC |
| What Are Glaciers?<br>*Earth, the Environment and Beyond Series* | 1992 | Support<br>7E / 8E | 467838 | $57.30<br>LRC |
| **Authorized Teaching Resources** | | | | |
| NEW Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) | 2000 | Authorized Teaching<br>General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E | 434803 | $12.00<br>LRC |
| Dynamic Earth: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)<br>*NGS Picture Pack Series* | 1998 | Authorized Teaching<br>7E / 8E | 470493 | $72.95<br>LRC |
| NEW Geology Explorer (Windows / Macintosh Version)<br>*Earthstation Library Series* | 2000 | Authorized Teaching<br>7C / 7E / 8E | 523028 | $92.60<br>LRC |
| Oceans<br>*National Geographic Geokit Series* | 1999 | Authorized Teaching<br>8E | 470518 | $403.30<br>LRC |
| Oceans - Climate Explorer (Windows / Macintosh Version)<br>*Earthstation Library Series* | 2000 | Authorized Teaching<br>7A / 8E | 472134 | $92.60<br>LRC |
| Wetlands Ecosystems II: Interactions and Ecosystems: Educator's Guide: Middle School Science Grades 7 to 8 | 1999 | Authorized Teaching<br>8E | 415499 | $7.00<br>LRC |


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# Grade 8: Annotated Bibliography (alphabetical listing)

| | LRC Order No.: | Est. Price: |
|---|---|---|
| • **Addison Wesley Science in Action 8 (Student Text)** | **449670** | **$68.30** |
| • **Addison Wesley Science in Action 8: Teacher's Resource Package** | **449696** | **$243.05** |

***Addison Wesley Science in Action 8 Series***

**Basic / Authorized Teaching Resource**

© 2001 **Author(s):** Booth, C. et al.

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |

This student book and teacher's resource binder provide direct support for the Alberta program of studies for Grade 8 Science. Together these resources provide an extensive set of learning activities and planning tools for students and teachers. Numerous Canadian and Alberta examples are provided. The student text includes an introductory outline and summary review section with each chapter, a science toolbox for skill development and a glossary of key terms. The teacher resource includes general sections on skill development, student assessment, and lists of required materials and equipment. Detailed sections in each unit include an overview, instructional suggestions, and several sets of blackline masters targeting a range of instructional and assessment needs.


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**Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)**

LRC Order No.: 434803 Est. Price: $12.00

**Authorized Teaching Resource**

© 2000 **Author(s):** Agban, J. et al.

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

This Canadian edition has been thoroughly revised in light of the *The Common Framework of Science Learning Outcomes* (Council of Ministers of Education Canada, 1997). This safety resource contains advice on such diverse topics as "Making Things," "Testing Things," "Food and Hygiene," "Heating and Burning," "Chemicals," "Electricity," "Animals," "Plants," "Micro-organisms," "Optical Instruments" and "Studies Out of School."

**The Cell**

***Microorganisms Series***

480038 $192.90

**Support Resource**

© 2001

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | ✓ | | | | | | | | |

This video takes students on a journey through the microscopic world of the cell. The video explains that all living things are composed of cells, and highlights the difference between animal cells and plant cells. The video emphasizes the importance of cells in our daily lives, using real-life examples and applications. Students learn about the discovery of cells and the development of cell theory. Through colourful and engaging animations, the different parts of a cell are explained. Some of the terminology and concepts covered in this video include cell theory, organelles, cell wall, cell membrane, cytoplasm, mitochondria, ribosomes, nucleus, chromosomes, lysosomes, tissues, organ, and the differences between prokaryotic and eukaryotic cells.

## Cell Processes

***Microorganisms Series***

**Support Resource**

© 2001

**LRC Order No.:** **480046** **Est. Price:** **$192.90**

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | ✓ | | | | | | | | |

In this program, students explore some of the important cell processes necessary for life. Vivid animation is used to clearly explain the process of cell growth and cell division. Using everyday examples, the video discusses how cells carry out the processes of diffusion, respiration, and osmosis. The different ways cells obtain, use and release energy are outlined. Terms and concepts covered in this video include: metabolism, respiration, diffusion, osmosis, chromatin, active transport, passive transport, mitosis, meiosis, asexual and sexual reproduction, and fermentation.

## Cells: The Building Blocks of Life

***Survey of Science: Biology Essentials Series***

**Support Resource**

© 1996

**ACCESS–The Education Station / Regional Resource and Urban Media Centres**

**BPN 2065601**

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | ✓ | | | | | | | | |

This video uses a series of short, concise segments to present the following concepts: the cell as the basic unit of life; single and multicellular organisms; specialization of cells; prokaryotic versus eukaryotic cells; and cellular structures (nucleus, organelles, nuclear membrane, cytoplasm, mitochondria, ER, ribosomes, golgi bodies, chloroplasts, cell membrane and cell walls) at a very basic level. The processes of diffusion, osmosis, and active transport are also described. The video addresses the use of cellular research in the area of cryobiology, and the medical advancements which have resulted. It also gives supplemental information on photosynthesis, cellular respiration, and enzyme/co-enzyme function. This resource covers a great breadth of concepts without going into too much detail. The computer generated graphics are visually appealing and assist student learning.


© Alberta Learning, Alberta, Canada

LRC Order No.: 478273 Est. Price: $70.10

## Cells and Tissues

***Science Key Concepts: Biology Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | ✓ | | | | | | | | |

This video consists of three major sections: "Animal Cells" (structures and tissue), "Plant Cells" (structures and tissue), and "Cell Division" (mitosis and meiosis). Each concept is illustrated by a variety of experiments that are too difficult or dangerous to be conducted in a school lab, as well as by live photography, microscopic photography of living cells, and computer animation. The video covers the differences between animal and plant cells, basic cellular components, and the definition of tissue (with specific examples from both plants and animals provided). There is a clear emphasis on the relationship between the function of a cell and its structure. The concepts of mitosis, meiosis, chromosomes, DNA, nucleic acids, and their relationships to sexual reproduction are clearly illustrated. The teacher's guide includes background information and suggestions for pre-viewing and extension activities. This resource would be an effective way to replace the in-class study of human cheek and blood cells.

**Note:**

• This video creates opportunity for discussion of why it is not appropriate to carry out hands-on studies of live human cells in the science classroom.


© Alberta Learning, Alberta, Canada

LRC Order No.: 470493 Est. Price: $72.95

**Dynamic Earth: NGS Picture Pack Transparencies** (includes Teacher's Guide and 40 Transparencies)

***NGS Picture Pack Series***

**Authorized Teaching Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | ✓ | | | | | ✓ | | | | | |

This teacher resource provides a set of 40 transparencies that show evidence of the dynamic Earth, including illustrations of folding, faulting, volcanoes, plate movements, mountain formation, glaciation, erosion and deposition. The illustrations consist mainly of photographs, but artwork depicting and explaining crustal movements is also included. A teacher's guide provides a paragraph of background information on each transparency and briefly outlines six mini-lessons that are based on use of the transparencies.

| | LRC Order No.: | Est. Price: |
|---|---|---|
| • **Energy Machines and Motion: Student Guide and Source Book** | **522335 (Pkg. of 4)** | **$178.55** |
| • **Energy Machines and Motion: Teacher's Guide** | **522343** | **$319.85** |

***Science and Technology Concepts for Middle Schools Series***

**Support / Authorized Teaching Resource**

© 2000 **Author(s):** Hanson, C. et al.

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | ✓ | | | | | ✓ | |

This activity-based resource teaches students about electrical energy, simple machines, and moving vehicles. The resource includes interesting details connected with these topics, as well as historical information on the scientific contributions made by well-known scientists such as Galileo, Volta, Davies, Edison, Newton and Watt. The concepts of force, work and power are presented, along with sample calculations. Mechanical advantage and efficiency of simple machines are also covered. The student guide includes background information, reading selections, safety tips, and step-by-step instructions to guide students through their classroom inquiries.

The guide supports teachers in using *Energy, Machines and Motion* in the classroom. The guide provides background material on science and pedagogy, guidance on the preparation and setup of kit materials, and detailed instructions for facilitating classroom science investigations. It also includes blackline masters, and assessment strategies, tools and scoring rubrics.

**Note:**

• Safety considerations will be an important factor in deciding which of the activities are suitable for independent and teacher-guided study.

LRC Order No.: Est. Price:

## Erosion

***Bill Nye the Science Guy Series***

**Support Resource**

**ACCESS–The Education Station / Regional Resource and Urban Media Centres**

**BPN 855286**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | ✓ | | | | | |

In this video, Bill Nye explains how wind, water and other agents of erosion help shape the earth's surface, emphasizing that erosion is a long and continuing process. Erosive processes are examined in the field, and then further explored through laboratory demonstrations of freeze-thaw action and chemical erosion. As he takes viewers on a tour of different landscapes, Nye points out evidence of erosion found in mountain, desert and coastal land forms.

**Note:**

- The video includes several rock music segments.

## Geology Explorer (Windows / Macintosh Version)

**523028 $92.60**

***Earthstation Library Series***

**Authorized Teaching Resource**

© 2000

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | ✓ | | ✓ | | | | | ✓ | | | | | |

*Geology Explorer* is a multimedia study of planet Earth from core to crust. Lessons cover topics such as rocks and minerals, weathering and plate tectonics, all through the perspective of earth scientists. The resource contains approximately 600 MB of educational content, including hundreds of photographs, detailed captions and text, digital video, 3D animations, charts, music, sound effects, and narration. In addition, the CD-ROM includes interactive exercises and projects such as virtual experiments, demonstrations, mini-games and puzzles. Multiple choice tests, a sample lesson on plate tectonics, an extensive glossary and a connection to EOA Scientific Systems Inc.'s *Earth Station Internet Campus* are included. A teacher's manual and user's guide are also provided on the CD-ROM.

**Human Body 1: NGS Picture Pack Transparencies** (includes Teacher's Guide and 40 Transparencies)

LRC Order No.: **467953** Est. Price: **$91.20**

***NGS Picture Pack Series***

**Authorized Teaching Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | ✓ | | | ✓ | | | | | | | | |

This resource is a visual library of images illustrating several human body systems. It explains the basic components and functions of the skeletal, muscular, nervous, and endocrine systems. The kit includes 40 overhead transparencies and a teacher's guide with captions and activities.

**Human Body 1: Picture Show CD-ROM** (Macintosh / Windows Version 4.0)

**467979** **$87.90**

***NGS PictureShow Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | ✓ | | | ✓ | | | | | | | | |

This CD-ROM consists of two self-contained shows that introduce the basic components and functions of the skeletal, muscular, nervous, and endocrine systems. In "Bones and Muscles," students can explore the skeletal framework that supports the body and the muscular system that allows the body to move and manipulate objects. In "Nervous and Endocrine Systems," they can discover the complex communication systems that link and control all the body functions and give us the ability to think and create. The resource also explains how these systems gather information through our senses, analyze the information, and then take action. This resource includes more than 100 images, music, narration and read-along text, a student guide, classroom activities and a user's guide.

LRC Order No.: 467961 Est. Price: $72.95

**Human Body 2: NGS Picture Pack Transparencies** (includes Teacher's Guide and 40 Transparencies)

***NGS Picture Pack Series***

**Authorized Teaching Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | ✓ | | | | | | | | |

This PicturePack resource is a visual library of images illustrating how the body processes and uses energy. It explores the cells of the human body and how they function in the circulatory, digestive, and respiratory systems. The kit consists of 40 overhead transparencies and a teacher's guide with captions and activities.

**Human Body 2: Picture Show CD-ROM** (Macintosh / Windows Version 4.0) **467987 $87.90**

***NGS PictureShow Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | ✓ | | | | | | | | |

This CD-ROM consists of two self-contained shows that introduce basic concepts related to the use and processing of energy by the human body. In "Cells and Circulation" students discover how our cells get a constant supply of food and oxygen through our circulatory system. They can find out why there is constant activity in all living cells and follow the flow of blood throughout the body to see how the heart is at the center of it all. In "Respiration and Digestion" students explore the things that the body does to nourish itself, learning how the respiratory system delivers oxygen to the blood and gets rid of carbon dioxide. This resource includes more than 100 images, music, narration and read-along text, a student guide, classroom activities and assessments sheets, and a user's guide.

LRC Order No.: 467945 Est. Price: $403.30

## Human Body I: Circulatory, Respiratory, Digestive, and Immune Systems

*National Geographic Geokit Series*

**Authorized Teaching Resource**

© 1997

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | ✓ | | | | | | | | |

This comprehensive kit explores the human body, focusing on the circulatory, respiratory, digestive, and immune systems through a variety of learning activities. The kit allows students to examine the structures and functions of major organs such as the heart, lungs and stomach, and learn about the anatomy, physiology and functions of the immune system. Three videos provide in-depth information on "Circulatory and Respiratory Systems," "Digestive System," and "Our Immune System." The kit also includes maps, colour transparencies, student handouts, trivia cards, National Geographic magazine articles, and a teacher's guide. The teacher's guide provides an overview, background information, a glossary, assessment suggestions, and other resources. Each section of the guide incorporates a K,W,L (What I Know, What I Want to Know, What I Learned) strategy, along with a number of hands-on activities. Inquiry-based lab and Internet activities let students develop their understanding of scientific process. A review test with 35 short-answer questions is also included.

**Note:**

• Because of the quantity and depth of materials, teachers will have to choose only a selection of activities in order to finish the unit within a reasonable time.

## Introducing the Cell

**510934 $104.05**

**Support Resource**

© 1995

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | ✓ | | | | | | | | |

This video introduces the cell as the basic unit of life common to all organisms. Plant and animal cells are shown and compared using microscopes and clearly illustrated drawings. Various cell components are discussed with multiple analogies that clarify the functions of each part. Cell differentiation is discussed with reference to the human body and its epidermal muscle, white and red blood cells, nerve and bone cells. A 10-question multiple-choice quiz is included with the video.


© Alberta Learning, Alberta, Canada

LRC Order No.: Est. Price:

## Lakes & Ponds

***Bill Nye the Science Guy Series***

**Support Resource**

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 855289

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | ✓ | | | | | |

In this video, Bill Nye explains how lakes and ponds are formed, and how rain, rivers, waterfalls and underground aquifers are part of a larger system of water flow—both above and below ground. Later, Nye describes the diverse sizes and shapes of water bodies found around Earth and the variety of living things found in them. The movement of pollutants through water is introduced, followed by a brief description of pollution's impacts on freshwater organisms. A short, point-form summary and a song by "The Froggy Boyz" are also included.

## Light and Optics: from Lenses to Polarisation: Containing over 16 Fully Interactive Simulations (Windows Version)

469818 (Single User) $88.85

469826 (5-User) $177.70

***Physics Simulation Series***

**Authorized Teaching Resource**

© 2001

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | ✓ | | | | | | | |

This CD-ROM provides a set of simulations that show how light beams interact with a variety of optical components including plane mirrors, spherical mirrors, convex lenses, systems of two lenses, telescopes, microscopes, the human eye, and diffraction gratings. The program is suitable for classroom demonstrations in which students are asked to predict, and then observe, the effect of a change to an optical setup.

**Note:**

• Although primarily suited for use as a teacher demonstration tool, this resource may also be suitable for direct use by the more capable student.

LRC Order No.: Est. Price:

## Marine Life

**479031** **$57.30**

***Animal Life and Beyond Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | ✓ | | | | | |

This video describes the diversity of living things found in ocean environments. Examples of pelagic organisms (surface dwelling and free swimming) and benthic organisms (bottom dwelling) are shown. Key features of marine environments are described, and adaptations to those environments are illustrated and explained.

## Microscopic Life Forms

**479049** **$57.30**

***Animal Life and Beyond Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | ✓ | | | | | | | | |

This video introduces students to three forms of microscopic life: monera, prostita and fungi. The video identifies representative organisms from each of the kingdoms, and shows general characteristics of each group using high magnification video sequences and computer animations. Reproduction of bacteria and other microorganisms in the environment, as well as the role of bacteria in human health, is described. This video is short, fast paced and conveys information in an accessible manner.

LRC Order No.: Est. Price:

**Mixtures and Solutions** (Video; Teacher's Guide; Pre-Test; Post-Test)
***Physical Science Series***
**Support Resource**

**Vendor Direct**

© 1998
Marlin Motion Pictures Ltd.; 211 Watline Avenue, MISSISSAUGA ON L4Z 1P3
Telephone: 888–260–2232; 905–890–1500 Internet: http://www.marlineducation.com

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | ✓ | | | | | | | | | |

This video provides a basic overview of concepts related to the mixture and flow of matter. The emphasis is on the classification of various types of mixtures. Topics covered include mixtures, homogeneous versus heterogeneous, colloids, suspensions, solutions, solutes and solvents, solubility, saturated versus unsaturated, and solubility graphs. The video presents the concepts in related groupings, providing a visual definition as each new concept is introduced. Blackline masters include pre- and post-viewing tests, a video quiz, experiments, a word search, discussion questions, and an Internet lesson. The teacher's guide provides a script of the narration and suggestions for integrating the blackline masters and video to form lessons.

**Note:**

- The video does not provide particle theory explanations for all of the concepts that are introduced.
- The demonstration of factors affecting solubility shows stirring occurring as part of the surface area demonstration and the temperature demonstration. This can be explained as being a controlled variable in the experimental process.
- Solubility graphs for copper (II) sulphate and dissolved oxygen are shown in a non-standard format. The manipulated variable, termperature, is shown on the y axis and the responding variable, the amount of solute dissolved, is shown on the x axis.

LRC Order No.: 470518 Est. Price: $403.30

## Oceans

***National Geographic Geokit Series***

**Authorized Teaching Resource**

© 1999

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | ✓ | | | | | |

This resource is a comprehensive multimedia kit on oceans, including transparencies, student articles for reproduction, a set of trivia cards, a map, a poster, a 115-page teacher guide, and three videos titled "Oceans in Motion," "The Living Ocean," and "Half a Mile Down." The resource introduces the physical characteristics of oceans and provides a broad survey of oceans as ecosystems, covering such topics as the sea floor, tides, waves, currents, climate, icebergs, coral reefs, biomes and ocean pollution. Outlines for several challenging activities are included. Activity outlines provide background, objectives, preparations, procedures and sample student data pages.

510950 $115.75

## Oceans: Charting the Vastness

***Survey of Science: Earth Science Essentials Series***

**Support Resource**

© 1996

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | ✓ | | | | | ✓ | | | | | |

Oceans cover over 70% of the earth's surface and have a significant influence on the planet's geology, life, and climate. This video explores the geology of the ocean floor, the composition of ocean water, the dynamics of ocean currents and tides, the formation of shoreline features, and the influence of the ocean on weather patterns. Effective animation is used to illustrate tide formation. The video also outlines the diversity of marine life in tidal pools, estuaries, kelp forests, and around deep sea vents. The video closes with a look at oil, gas and other resources and their extraction from below the sea.

LRC Order No.: 472134 Est. Price: $92.60

## Oceans - Climate Explorer (Windows / Macintosh Version)

***Earthstation Library Series***

**Authorized Teaching Resource**

© 2000

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | | | | | | | | | ✓ | | | | | |

This interactive multimedia resource focuses on oceanography and meteorology, providing a comprehensive exploration of the relationships between water and Earth's climate. Over 600 MB of exercises, images, videos, games, experiments, demos and puzzles are included in the program. The video clips cover topics ranging from the structure of the ocean to human activities and climate. An extensive glossary is also provided.

**Note:**

- This is a resource for teachers, but is also suitable as a reference source for more advanced students.

467804 $46.70

## Pond & River

***Eyewitness Series***

**Support Resource**

© 1996

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | ✓ | | | | | |

This video, part of a series based on the EYEWITNESS books, provides students with live action photography and video footage of the freshwater habitats of ponds and rivers. The program explores how rivers and ponds form; examines water quality, river flow, erosion and deposition; and describes plant and animal interactions, biodiversity and adaptations in river and pond environments. The video also includes segments addressing the roles of rivers and ponds in human history and societies. The process of making the film and the use of special effects are presented at the end of the tape.

**Note:**

- Different cultural/religious beliefs about rivers are briefly described.


© Alberta Learning, Alberta, Canada

LRC Order No.: 480905 Est. Price: $76.00

## Properties of Matter

***Physical Science in Action Series***

**Support Resource**

© 2000

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | ✓ | | | ✓ | | | | | | | | | |

This resource explores the physical properties of matter through the format of a young student on a field trip presenting what she has learned. The video first explains the concepts of matter and the atom. Once this foundation is established, the resource investigates phases of matter (explained in terms of atomic arrangement and movement of particles) and how matter behaves in the natural world. Physical properties of matter—such as mass, weight, volume and density—are presented. Common applications of density differences, such as hot air balloons, are identified. Important concepts and terms are defined and described through graphics and interpretive animations. Demonstrations are also used to illustrate concepts: for example, how density causes one liquid to float on another and how this can reverse with temperature change.

## Respiration

479221 $57.30

***Our Human Body Series***

**Support Resource**

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | ✓ | | | | | | | | |

This video provides a focused, easy to follow look at the basics of breathing. It begins by introducing the concepts of aerobic and anaerobic respiration and their purposes for the organism. It then gives an effective overview of the various methods that organisms use to carry out respiration, beginning with simple structures and progressing to complex systems for respiration. Examples include direct diffusion, cutaneous respiration, bronchial respiration, tracheal respiration and the human respiratory tract. The video uses appropriate graphics and visual cueing to enhance students' understanding of the concepts.

**Note:**

- There are several non-metric references made to lung and breath capacities.

| | LRC Order No.: | Est. Price: |
|---|---|---|
| • **ScienceFocus 8 (Student Text)** | **449729** | **$67.45** |
| • **ScienceFocus 8: Teacher's Resource Binder** (with Blackline Masters on CD-ROM) (Macintosh / Windows Version) | **449737** | **$237.50** |
| • **ScienceFocus 8: Teacher's Productivity Package** (Macintosh / Windows Version 4.0) (includes Teacher's Resource; Blackline Masters; Illustrations) | **508400** | **$149.35** |
| • **ScienceFocus 8: Illustrations CD-ROM** (Macintosh / Windows Version 4.0) | **451881** | **$174.50** |

***ScienceFocus 8: Science • Technology • Society Series***

**Basic / Authorized Teaching Resource**

© 2001 **Author(s):** Edwards, L. et al.

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |

This student book and teacher's materials provide direct support for the Alberta program of studies for Grade 8 Science. Together these resources provide a very extensive set of learning activities, and background readings for students and teachers. Numerous Canadian and Alberta examples are provided. The student text includes preview and review sections with each chapter, a science skills guide and a glossary of key terms. The teacher resource includes general sections on science safety, student assessment, course materials, and blackline masters, as well as detailed unit guides including an introduction, teacher background and instructional suggestions.

## The Scientific Method

**510976** **$92.35**

**Support Resource**

**ACCESS–The Education Station / Regional Resource and Urban Media Centres**

© 2000

**BPN 2065501**

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
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| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |

This resource presents nine steps in developing a theory using scientific method, and defines and explains different types of variables. Three individual investigations are used to show the scientific method in practice and highlight the individual steps. Pacing, examples and graphics are appropriate for a junior high audience. This resource could be used at the beginning of each unit of study to reintroduce students to the scientific method.


© Alberta Learning, Alberta, Canada

LRC Order No.: 485492 Est. Price: $192.90

## Simple Machines (Videocassette with Teacher's Guide)

***Motion, Energy and Force Series***

**Authorized Teaching Resource**

© 2000

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | ✓ | | | | | | |

Our world is full of simple machines that aid in our daily routines. This video identifies common, everyday simple machines, and demonstrates their practical use. Work and power are defined and calculated in real-life applications that illustrate mechanical advantage and efficiency. Machines discussed include levers, inclined planes, pulleys, wheel and axle, screws, and wedges.

414780 $24.55

## Solutions

**Authorized Teaching Resource**

© 1990 **Author(s):** Marson, R.

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | ✓ | | | | | | | | | |

This teacher resource book provides background information, lesson outlines and blackline masters for 28 learning activities on chemical solutions, suitable for Grade 8. Topics developed in this resource include rate of dissolving, solubility curves, filters, distillation, water purification, water of hydration, and the interaction of oil and water. Reproducible student activity cards are included. Key steps in the activities are outlined and illustrated.

LRC Order No.: 482183 Est. Price: $70.10

## **Water Erosion and Landforms** (Video and Guide)

***Earth Science Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | ✓ | | | | | ✓ | | | | | |

This video looks at water as the most powerful erosional force on Earth. The video begins with a distinction between weathering and erosion, leads into an animated description of the water cycle, then examines the erosion processes associated with glaciers, streams and rivers, and waterfalls. It presents some interesting visual examples of land forms shaped by water action and, with the use of effective animations, provides an interpretive explanation of their formation. The formation of V-shaped valleys of young rivers is explained, as is the formation of meanders and oxbow lakes connected with more mature streams. Some attention is given to sediment, floods, flood plains, as well as various means of controlling flooding. A summary of the major points and a final note about the constant evolution of land forms complete the video.

**482208** **$70.10**

## **Waves** (Video and Guide)

***Science Key Concepts: Physics Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | ✓ | | | | | | | |

This short video deals with the transfer of energy in the form of waves, including sea waves, laser light waves, earthquakes, and the natural frequency of waves in a bridge. The video explains wavelength and frequency of waves, as well as the difference between transverse and longitudinal waves. Effective animations are used to demonstrate each type and to show that the medium oscillates in one place but the energy is passed along. Reflection of waves, including light, is demonstrated, and the application of this property is shown in a variety of situations. Demonstrations of light refraction are also presented and discussed. Total internal reflection of light within an optic fiber is described, along with applications of this property in today's global communications systems.


© Alberta Learning, Alberta, Canada

LRC Order No.: Est. Price:

**• Wetlands Ecosystems II: Interactions and Ecosystems: Student Journal: Middle School Science Grades 7 to 8** **415481** **$7.00**

**• Wetlands Ecosystems II: Interactions and Ecosystems: Educator's Guide: Middle School Science Grades 7 to 8** **415499** **$7.00**

***Wetlands Ecosystems II: Interactions and Ecosystems Series***

**Support / Authorized Teaching Resource**

© 1999

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | ✓ | | | | | |

This student manual and teacher manual were developed to support the study of wetland ecosystems by Alberta students in Grade 8. Linked to the accompanying teacher manual, the student manual provides background information, illustrations and space for students to enter specific observations, information and analysis. Each of the 14 activities outlined in the teacher manual are correlated to the Alberta program of studies and include a vocabulary list, learning outcomes, a materials list, and a description of the activity. The manual also contains blackline masters that illustrate the classification of wetland organisms and provide guidance in some specific techniques. Both classroom and field activities are described in this guide. Changes to this new edition include editing the resource to improve its clarity and conciseness, rephrasing the learner outcomes to align with the Pan-Canadian Science Framework, deleting two lessons, and reformatting the student book to standard letter size.

**What Are Glaciers?** **467838** **$57.30**

***Earth, the Environment and Beyond Series***

**Support Resource**

© 1992

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | ✓ | | | | | ✓ | | | | | |

This video introduces what a glacier is and how it forms, describes how and where glaciers move, and presents the history of glaciers. It also describes the effects of glacial erosion and the landform it creates.

LRC Order No.: 513368 Est. Price: $34.95

## The World of Living Things (with Teacher's Guide)

***Biology: The Science of Life Series***

**Authorized Teaching Resource**

© 2001

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | ✓ | | | | | | | | |

This video explores the question "What is life?" Viewers will learn what characteristics are shared by all living things and the significance of each to life itself. They can then explore the great variety of life forms on Earth and discover how they are grouped into five kingdoms. This video provides a brief description of each kingdom and gives examples of organisms that belong to each group. It culminates with a True-False quiz as a review of the major concepts covered.


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© Alberta Learning, Alberta, Canada

# Alberta Authorized Resource List and Annotated Bibliography

## Grade 9 Science

Alberta
LEARNING
Learning and Teaching Resources Branch

# GRADE 9
## Units A, B, C, D, E

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Basic Learning Resources** | | | | |
| ***Addison Wesley Science in Action 9 Series*** | | | | |
| Science in Action 9 (Student Text)<br>*Addison Wesley Science in Action 9 Series* | 2002 | **Basic**<br>9A / 9B / 9C / 9D / 9E | 470675 | $73.05<br>LRC |
| Science in Action 9: Teacher's Resource Package<br>*Addison Wesley Science in Action 9 Series* | 2002 | Authorized Teaching<br>9A / 9B / 9C / 9D / 9E | 470683 | $233.80<br>LRC |
| ***ScienceFocus 9 Series*** | | | | |
| ScienceFocus 9: Science • Technology • Society (Student Text)<br>*ScienceFocus 9 Series* | 2002 | **Basic**<br>9A / 9B / 9C / 9D / 9E | 470625 | $68.05<br>LRC |
| ScienceFocus 9: Science • Technology • Society: Blackline Masters CD-ROM (Macintosh / Windows Version)<br>*ScienceFocus 9 Series* | 2002 | Authorized Teaching<br>9A / 9B / 9C / 9D / 9E | 470732 | $174.75<br>LRC |
| ScienceFocus 9: Science • Technology • Society: Teacher's Resource Binder (includes Teacher's Resource CD-ROM (Macintosh / Windows Version))<br>*ScienceFocus 9 Series* | 2002 | Authorized Teaching<br>9A / 9B / 9C / 9D / 9E | 470633 | $116.85<br>LRC |


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# GRADE 9
## Unit A - Biological Diversity

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Support Learning Resources** | | | | |
| Animal Adaptation | 1996 | Support 9A | 510843 | $70.10 LRC |
| Animal Adaptations<br>*Animal Life in Action Series* | 2000 | Support 9A | 510918 | $76.00 LRC |
| Return of the Peregrine | 2001 | Support 9A / 9C | BPN 2044801 | ACCESS–The Education Station |
| NEW Right Whales<br>*Champions of the Wild Series* | 1998 | Support 9A | 520892 | $46.70 LRC |
| NEW Swift Foxes<br>*Champions of the Wild Series* | 1998 | Support 9A | 520909 | $46.70 LRC |
| **Authorized Teaching Resources** | | | | |
| NEW Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) | 2000 | Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E | 434803 | $12.00 LRC |
| NEW Genetics: The Molecular Basis of Heredity (with Teacher's Guide)<br>*Elements of Biology Series* | 2002 | Authorized Teaching 9A | 525090 | $70.10 LRC |
| NEW Habitats: Realm of the Tiger<br>*National Geographic Geokit Series* | 1998 | Authorized Teaching 9A | 506199 | $403.30 LRC |
| Nelson Science 9: Computerized Assessment Bank (Macintosh / Windows Version 1.0)<br>*Nelson Science 9 Series* | 2000 | Authorized Teaching 9A, 9B, 9D, 9E | 508450 | $270.35 LRC |
| Nelson Science 9: Transparencies<br>*Nelson Science 9 Series* | 2000 | Authorized Teaching 9A, 9B, 9D, 9E | 508468 | $270.35 LRC |


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# GRADE 9

## Unit B - Matter and Chemical Change

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Support Learning Resources** | | | | |
| NEW Reactivity of Elements<br>*Science Key Concepts: Chemistry Series* | | Support<br>9B | 513243 | $34.95<br>LRC |
| **Authorized Teaching Resources** | | | | |
| NEW Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) | 2000 | Authorized Teaching<br>General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E | 434803 | $12.00<br>LRC |
| Nelson Science 9: Computerized Assessment Bank (Macintosh / Windows Version 1.0)<br>*Nelson Science 9 Series* | 2000 | Authorized Teaching<br>9A, 9B, 9D, 9E | 508450 | $270.35<br>LRC |
| Nelson Science 9: Transparencies<br>*Nelson Science 9 Series* | 2000 | Authorized Teaching<br>9A, 9B, 9D, 9E | 508468 | $270.35<br>LRC |


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# GRADE 9

## Unit C - Environmental Chemistry

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Support Learning Resources** | | | | |
| Investigating Water Pollutants (Kit) | 1999 | Support 9C | 510447 | $102.90 LRC |
| Return of the Peregrine | 2001 | Support 9A / 9C | BPN 2044801 | ACCESS–The Education Station |
| **Authorized Teaching Resources** | | | | |
| NEW Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) | 2000 | Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E | 434803 | $12.00 LRC |


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# GRADE 9

## Unit D - Electrical Principles and Technologies

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Support Learning Resources** | | | | |
| Electricity: How It Works | 2000 | Support 9D | 510926 | $92.35 LRC |
| Electricity: The Invisible River of Energy (Macintosh / Windows Version 2.0) *AIMS Interactive Science Essentials Series* | 1997 | Support 9D | 511081 | $35.05 LRC |
| NEW Energy Machines and Motion: Student Guide and Source Book *Science and Technology Concepts for Middle Schools Series* | 2000 | Support 8D / 9D | 522335 | $178.55 LRC |
| **Authorized Teaching Resources** | | | | |
| NEW Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) | 2000 | Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E | 434803 | $12.00 LRC |
| NEW Energy Machines and Motion: Teacher's Guide *Science and Technology Concepts for Middle Schools Series* | 2000 | Authorized Teaching 8D / 9D | 522343 | $319.85 LRC |
| Nelson Science 9: Computerized Assessment Bank (Macintosh / Windows Version 1.0) *Nelson Science 9 Series* | 2000 | Authorized Teaching 9A, 9B, 9D, 9E | 508450 | $270.35 LRC |
| Nelson Science 9: Transparencies *Nelson Science 9 Series* | 2000 | Authorized Teaching 9A, 9B, 9D, 9E | 508468 | $270.35 LRC |


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# GRADE 9
## Unit E - Space Exploration

| Series / Title | Copyright Date | Status / Unit(s) | LRC Order No. | Price |
|---|---|---|---|---|
| **Support Learning Resources** | | | | |
| Out of Sight: A Study of Life and Physical Phenomena in Space<br>*Science Links Series* | 2000 | Support<br>9E | 508442 | $9.90<br>LRC |
| Stars and Galaxies (Macintosh / Windows Version)<br>*NGS PictureShow Series* | 1998 | Support<br>9E | 509052 | $109.90<br>LRC |
| Turn Left at Alpha Centauri<br>*Science Links Series* | 1998 | Support<br>9E | 508434 | $9.90<br>LRC |
| **Authorized Teaching Resources** | | | | |
| NEW Astronomy<br>*National Geographic Geokit Series* | 1998 | Authorized Teaching<br>9E | 506181 | $403.30<br>LRC |
| NEW Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) | 2000 | Authorized Teaching<br>General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E | 434803 | $12.00<br>LRC |
| The Earth, Moon & Sun with Paper Plates, Bottles, Tennis Balls and Simple Things | 1993 | Authorized Teaching<br>9E | 415051 | $30.40<br>LRC |
| Nelson Science 9: Computerized Assessment Bank (Macintosh / Windows Version 1.0)<br>*Nelson Science 9 Series* | 2000 | Authorized Teaching<br>9A, 9B, 9D, 9E | 508450 | $270.35<br>LRC |
| Nelson Science 9: Transparencies<br>*Nelson Science 9 Series* | 2000 | Authorized Teaching<br>9A, 9B, 9D, 9E | 508468 | $270.35<br>LRC |
| Solar System: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)<br>*NGS Picture Pack Series* | 1998 | Authorized Teaching<br>9E | 509078 | $91.20<br>LRC |
| Stars and Galaxies: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)<br>*NGS Picture Pack Series* | 1998 | Authorized Teaching<br>9E | 509060 | $91.20<br>LRC |

# Grade 9: Annotated Bibliography (alphabetical listing)

LRC Order No.: Est. Price:

- **Addison Wesley Science in Action 9 (Student Text)** — **470675** — **$73.05**
- **Addison Wesley Science in Action 9: Teacher's Resource Package** — **470683** — **$233.80**

***Addison Wesley Science in Action 9 Series***

**Basic / Authorized Teaching Resource**

© 2002 **Author(s):** Mah, K. et al.

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |

This student book provides direct support for the Alberta program of studies for Grade 9 Science. It presents concept development and scientific facts relevant to the program, and an extensive set of learning activities for students. Each chapter includes an introductory outline, an overview, a summary review section, a science toolbox for skill development, and a glossary of key terms. Numerous Canadian and Alberta examples are included.

## Animal Adaptation

**510843** **$70.10**

**Support Resource**

© 1996

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | ✓ | | | | |

This program defines and provides multiple examples of animal adaptation to various environments. Features that help an organism survive in aquatic and terrestrial environments are illustrated from simple to complex animals, with reference to structural, functional and behavioural adaptations. The resource draws on ideas of Darwinian evolution in interpreting various phyla from simple cnidarian to more complex vertebrates, and in explaining specific adaptations related to gas exchange, temperature regulation, and body support. Teacher resource materials for pre- and post-viewing are provided on a single supplementary page.

LRC Order No.: 510918 Est. Price: $76.00

## Animal Adaptations (Video with Teacher's Guide)

***Animal Life in Action Series***

**Support Resource**

© 2000 **Author(s):** Bense, P. (Teacher's Guide)

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | ✓ | | | | |

This video presents a wide variety of animal adaptations, from the giraffe's long neck to the hummingbird's ability to fly backwards, in a fast-paced, informative format. A teacher's guide outlines pre- and post-viewing activities and discussion questions. The video touches on sexual reproduction, diversity within species, natural versus artificial selection, and how characteristics are passed from generation to generation.

506181 $403.30

## Astronomy

***National Geographic Geokit Series***

**Authorized Teaching Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | | | | | ✓ |

This multimedia kit is a comprehensive resource on astronomy that includes transparencies, three videos, student articles for reproduction, a set of trivia cards, a map, a poster, and a 115-page teacher guide. The resource provides a broad survey of the major concepts of astronomy: celestial bodies, technological developments such as the Galileo probe and the Hubble telescope, and the history and myths surrounding the stars. Lesson plans are provided to develop concepts, with objectives and assessment ideas included. The videos are titled "Exploring Our Solar System," "Stars and Constellations," and "Sun, Earth, Moon."

LRC Order No.: 434803 Est. Price: $12.00

## Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)

**Authorized Teaching Resource**

© 2000 **Author(s):** Agban, J. et al.

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

This Canadian edition has been thoroughly revised in light of the *The Common Framework of Science Learning Outcomes* (Council of Ministers of Education Canada, 1997). This safety resource contains advice on such diverse topics as "Making Things," "Testing Things," "Food and Hygiene," "Heating and Burning," "Chemicals," "Electricity," "Animals," "Plants," "Micro-organisms," "Optical Instruments" and "Studies Out of School."

## The Earth, Moon & Sun with Paper Plates, Bottles, Tennis Balls and Simple Things

LRC Order No.: 415051 Est. Price: $30.40

**Authorized Teaching Resource**

© 1993 **Author(s):** Marson, R.

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | | | | | ✓ |

This well-illustrated teacher resource book provides background information, lesson outlines and blackline masters for 20 learning activities on Earth, moon and sun. Topics developed in this resource include the development and interpretation of models, and a variety of techniques for measuring and describing position and motion of bodies observed in the day and night sky. Blackline masters include simple tools for measuring and recording elevation and azimuth of objects observed.

LRC Order No.: 510926 Est. Price: $92.35

## Electricity: How It Works

**Support Resource**

© 2000

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | | | | ✓ | |

This Australian-produced video shows that basic electrical principles remain constant regardless of where you are in the world. Topics covered include static and current electricity, electron pumps (devices that cause electrons to move, such as wet cells, generators, thermocouples and photovoltaics) and a brief description of alternating current, direct current and how diodes can be used. The video demonstrates general electrical principles, but does not explore any one area in detail.

## Electricity: The Invisible River of Energy (Macintosh / Windows Version 2.0)

LRC Order No.: 511081 Est. Price: $35.05

***AIMS Interactive Science Essentials Series***

**Support Resource**

© 1997

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | | | | ✓ | |

This dual platform (Macintosh and Windows) CD-ROM offers a general overview of how electricity works. The resource discusses the following topics: static electricity, current electricity, conductors, voltage, circuits (series and parallel), resistance (Ohms and amperes), switches, circuit breakers, watts, magnetic fields, light, heat, and motors. The CD is set up as a QuickTime video with demonstrations of each concept. A glossary of terms is included and directly linked to the video: when you check a term in the glossary, the QuickTime video automatically starts at the relevant point. A quiz (with immediate feedback) and a test (with feedback at end of the test) are provided. The resource is easily navigated, with a menu of options on the left hand side. Icons are large and easily understood. This resource could be used individually, or with a group using a projector.

| | LRC Order No.: | Est. Price: |
|---|---|---|
| • **Energy Machines and Motion: Student Guide and Source Book** | **522335 (Pkg. of 4)** | **$178.55** |
| • **Energy Machines and Motion: Teacher's Guide** | **522343** | **$319.85** |

***Science and Technology Concepts for Middle Schools Series***

**Support / Authorized Teaching Resource**

© 2000 **Author(s):** Hanson, C. et al.

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | ✓ | | | | | ✓ | |

This activity-based resource teaches students about electrical energy, simple machines, and moving vehicles. The resource includes interesting details connected with these topics, as well as historical information on the scientific contributions made by well-known scientists such as Galileo, Volta, Davies, Edison, Newton and Watt. The concepts of force, work and power are presented, along with sample calculations. Mechanical advantage and efficiency of simple machines are also covered. The student guide includes background information, reading selections, safety tips, and step-by-step instructions to guide students through their classroom inquiries.

The guide supports teachers in using *Energy, Machines and Motion* in the classroom. The guide provides background material on science and pedagogy, guidance on the preparation and setup of kit materials, and detailed instructions for facilitating classroom science investigations. It also includes blackline masters, and assessment strategies, tools and scoring rubrics.

**Note:**

• Safety considerations will be an important factor in deciding which of the activities are suitable for independent and teacher-guided study.

LRC Order No.: Est. Price:

## Genetics: The Molecular Basis of Heredity (with Teacher's Guide)

525090 $70.10

*Elements of Biology Series*

**Authorized Teaching Resource**

© 2002 **Author(s):** Freeman, B. (Teacher's Guide)

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | ✓ | | | | |

This resource provides a comprehensive look at genetics in an engaging 20-minute video. The video is broken up into sections on DNA, chromosomes, genes, mitosis, meiosis, patterns of inheritance, mutations, and cell differentiation. The accompanying teacher's guide includes excellent blackline masters to support the video. A complete transcript is also provided to support students of varying abilities. At the end of the video, a quiz is presented to check for student understanding.

## Habitats: Realm of the Tiger

506199 $403.30

*National Geographic Geokit Series*

**Authorized Teaching Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | ✓ | | | | |

*Habitats: Realm of the Tiger* introduces students to the biology and ecology of the tiger. This is an integrated teaching package with connections to science, social studies, language arts and mathematics. The complete kit requires a minimum of ten 60-minute lessons to complete; however, it can be used in segments. All lessons require some teacher preparation, but instructions are easy to follow. Overviews, lessons, color overheads, posters, blackline masters, and videos are all included. This resource could provide an alternate context to cover most of the outcomes related to biodiversity.

LRC Order No.: 510447 Est. Price: $102.90

## Investigating Water Pollutants (Kit)

**Support Resource**

© 1999

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | | | ✓ | | |

This comprehensive kit includes detailed student and teacher guides, along with enough materials for ten groups to test two water samples for each of seven factors (Cl, Cu, phosphates, dissolved $O_2$, nitrates, hardness and pH). Unknown water samples are included to ensure positive tests for various pollutants. The kit is an easy-to-use, skills-based resource. A 1-800 number is provided for technical support.

- **Nelson Science 9: Computerized Assessment Bank** (Macintosh / Windows Version 1.0) **508450 $270.35**
- **Nelson Science 9: Transparencies** **508468 $270.35**

***Nelson Science 9 Series***

**Authorized Teaching Resource**

© 2000 **Author(s):** Plumb, D. et al.

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | ✓ | ✓ | | ✓ | ✓ |

This user-friendly CD-ROM program contains 1,000 questions to support the Nelson Science 9 student text, covering concepts related to matter, reproduction, electricity and space. Features include "Build A Test," "Random Test Generator" and a comprehensive assessment guide with an assessment philosophy and skills-based rubrics provided. Multiple choice, short answer, extended answer, and performance tasks are included, and can be easily edited. Questions are rated by achievement category and correlated with the Ontario science curriculum, which can be easily related to the Alberta program. The software will run with most word processors (Mac or PC format).

LRC Order No.: 508442 Est. Price: $9.90

## Out of Sight: A Study of Life and Physical Phenomena in Space

***Science Links Series***

**Support Resource**

© 2000

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | | | | | ✓ |

Science Links is an integrated science curriculum consisting of 14 self-contained modules, each built around a theme of interest to teens. *Out of Sight* is one of two modules focused on space and space exploration. It covers ten topics, each with background readings, step-by-step instructions for investigations, and discussion and homework questions. The hands-on exploratory activities suggested for small groups follow a consistent instructional process, allowing students to make the connection between science and their everyday lives. Topics covered in this module include: power to explore space, intermolecular forces, weightlessness, living in space, gravitational force, alien life forms, the expanding universe and stars.

513243 $34.95

## Reactivity of Elements

***Science Key Concepts: Chemistry Series***

**Support Resource**

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | | ✓ | | | |

This 15-minute video explores the reactivity of elements and their placement on the periodic table. The video is divided into three parts. Part 1 examines the reactivity of the alkali metals; part 2 examines the reactivity of the halogens; and part 3 explores the range of reactivity among metals. Various chemical reactions, along with their reaction equations, are shown in order to demonstrate to students the trends in reactivity. Computer animation is used to illustrate the placement of elements and reactivity trends on the periodic table. The accompanying print material includes background information, suggested discussion questions, and two possible experiments.

LRC Order No.: Est. Price:

## Return of the Peregrine

**Support Resource**

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 2044801

© 2001

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | ✓ | | ✓ | | | ✓ | | ✓ | | |

This 48-minute video presents an engaging look at the peregrine falcon's decline after WWII and the realization that DDT was causing a problem in egg reproduction. It follows two Alberta scientists through their struggles and successes in trying to save this species. The captive breeding program in and around Edmonton shows both successes and limitations of human interventions to minimize loss of species diversity.

520892 $46.70

## Right Whales

***Champions of the Wild Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | ✓ | | | | |

The *Champions of the Wild* series deals with various endangered species and the people who are trying to save them. This video focuses on right whales, an endangered species that lives off both of Canada's coasts. The video examines why these animals are being threatened, giving background on whaling and on the modern dangers to the whales. The video also explores what actions are being taken to protect the right whales and their habitats, focusing on the work of Dr. Moira Brown and Deborah Tobin, who founded East Coast Ecosystems, an organization dedicated to the conservation and monitoring of right whales. This resource could be used to illustrate to students different ways that the public can help to protect a specific species.

| | LRC Order No.: | Est. Price: |
|---|---|---|
| • **ScienceFocus 9 (Student Text)** | **470625** | **$68.05** |
| • **ScienceFocus 9: Teacher's Resource Binder** (includes Teacher's Resource CD-ROM (Macintosh / Windows Version)) | **470633** | **$116.85** |
| • **ScienceFocus 9: Blackline Masters CD-ROM** (Macintosh / Windows Version) | **470732** | **$174.75** |

***ScienceFocus 9: Science • Technology • Society Series***

**Basic Resource**

© 2002 **Author(s):** Lindenberg, D. et al.

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |

This student text provides direct support for the Alberta program of studies for Grade 9 Science. The resource provides an extensive set of learning activities and background readings for students. The student text includes preview and review sections with each chapter, a science skills guide, and a glossary of key terms. Numerous Canadian and Alberta examples are included.

The comprehensive *Teacher's Resource Binder* is a valuable complement to the *ScienceFocus 9* student textbook. It provides a variety of teaching strategies for this program, relevant ICT outcomes that tie into Grade 9 Science, as well as the curricular correlation of activities and concepts developed. Course apparatus and materials are listed for each of the five units. Also included is a section on microchemistry, a technique of using smaller quantities of chemicals, and one on laboratory safety. All of this information is integrated into each unit to assist teachers in their lesson planning and effective delivery of the course content.

The *Blackline Masters CD-ROM* gives teachers convenient access to all the blackline masters developed for each unit of the Grade 9 Science program, as well as those intended for student review of course material and a number designed as teacher assessment tools.

LRC Order No.: 509078 Est. Price: $91.20

**Solar System: NGS Picture Pack Transparencies** (includes Teacher's Guide and 40 Transparencies)

***NGS Picture Pack Series***

**Authorized Teaching Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | | | | | ✓ |

This set of transparencies contains colourful representations of the planets, moons and asteroids. Both paintings and photographs are used to show a variety of images similar to those in the corresponding NGS PictureShow CD-ROM. The resource is suitable for Science 9E: Space Exploration, and could be used to stimulate students' interest.

**Stars and Galaxies** (Macintosh / Windows Version) **509052 $109.90**

***NGS PictureShow Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | | | | | ✓ |

This CD-ROM examines the distribution of matter in the universe, including the properties and classes of stars, and the classes and formation of galaxies. The majority of the information is delivered through two multimedia presentation files using narration, music and images. Students can copy and paste or print the text or pictures for research purposes. The resource also comes with basic assessment sheets and classroom activities. The still images supplied in this CD-ROM are also available in the corresponding transparency pack.

LRC Order No.: 509060 Est. Price: $91.20

**Stars and Galaxies: NGS Picture Pack Transparencies** (includes Teacher's Guide and 40 Transparencies)

***NGS Picture Pack Series***

**Authorized Teaching Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | | | | | ✓ |

This set of transparencies includes images of white dwarfs, red and blue giants, neutrons stars, pulsars, nebulae, and the typical life cycle of a star. Also included are interesting details about distant spiral, elliptical and irregular galaxies. Information for each transparency is included in a teacher's guide. This resource would be useful as an interest catcher when covering Unit E: Space Exploration.

520909 $46.70

**Swift Foxes**

***Champions of the Wild Series***

**Support Resource**

© 1998

| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | ✓ | | | | |

The *Champions of the Wild* series deals with various endangered species and the people who are trying to save them. This video deals specifically with the extirpation of swift foxes in Canada, revealing how these animals were brought virtually to extinction by plowing and animal poisoning. The main focus of the video is the struggle of the Smeeton family to breed the foxes in captivity for reintroduction in the wild. The video highlights one of the primary obstacles that Clio Smeeton has faced: the Canadian government's belief in translocation rather than breeding captive animals has meant Smeeton must sustain her reserve through private funding.

LRC Order No.: 508434 Est. Price: $9.90

## Turn Left at Alpha Centauri

***Science Links Series***

**Support Resource**

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| Grade 7 | | | | | Grade 8 | | | | | Grade 9 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit A Interactions and Ecosystems | Unit B Plants for Food and Fibre | Unit C Heat and Temperature | Unit D Structure and Forces | Unit E Planet Earth | Unit A Mix and Flow of Matter | Unit B Cells and Systems | Unit C Light and Optical Systems | Unit D Mechanical Systems | Unit E Freshwater and Saltwater Systems | Unit A Biological Diversity | Unit B Matter and Chemical Change | Unit C Environmental Chemistry | Unit D Electrical Principles & Technologies | Unit E Space Exploration |
| | | | | | | | | | | | | | | ✓ |

Science Links is an integrated science curriculum consisting of 14 self-contained modules, each built around a theme of interest to teens. *Turn Left At Alpha Centauri* is one of two modules focused on space and space exploration. It covers 13 topics, each with background readings, step-by-step instructions for investigations, and discussion and homework questions. The hands-on exploratory activities suggested for small groups follow a consistent instructional process, allowing students to make the connection between science and their everyday lives. Topics covered in this module include: life-support systems in space, measuring weight in space, weightlessness, gravity and orbits, craters and cosmic collisions, elements and their spectrum, survey of the planets, stars and their colour, red shift, cosmic distance and parallax angle, and the expanding universe.


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# ALBERTA AUTHORIZED RESOURCE LIST and ANNOTATED BIBLIOGRAPHY

## Vendors/Distributors

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# Vendors/Distributors

ACCESS–The Education Station
3720 – 76 Avenue
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Telephone: 800–352–8293; 780–440–7728
Fax: 780–440–8899
Internet: http://www.accesslearning.com

Federation of Ontario Naturalists
355 Lesmill Road
DON MILLS, ON, CANADA M3B 2W8
Telephone: 416–444–8419
Fax: 416–444–9866
Internet: http://www.ontarionature.org/

Learning Resources Centre (LRC)
12360 – 142 Street
EDMONTON, AB, CANADA T5L 4X9
Telephone: 780–427–5775
Fax: 780–422–9750
Internet: http://www.lrc.learning.gov.ab.ca

Marlin Motion Pictures Ltd.
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Internet: http://www.marlineducation.com

Reel Girls Media
204–8407 Argyll Road
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